



# Mount Vernon Fire Department Strategic Plan

Presented by:

*Michael B. Sherman*, President  
*4M Consulting*

January 5, 2005



4M Consulting

Excellence Through Preparation

Fire, Police, & EMS

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January 5, 2005

Steve Abel, Fire Chief  
Mount Vernon Fire Department  
1901 N. LaVenture Road  
Mount Vernon, WA 98273

Dear Steve,

We enjoyed working with your organization and the planning team members during the development of the *Mount Vernon Fire Department (MVFD) Strategic Plan*. The team's commitment to the project created a comfortable environment to focus on positive change for the future. The planning team members served the MVFD constituents well by devoting many hours to the necessary review and creation of this plan.

We encourage the management team of MVFD to update the goal progress at each staff meeting by using the electronic modified Gantt chart provided. This goal progress tracking mechanism in conjunction with the corporate values, refined mission statement, vision statement, and the overall analysis and review of the MVFD operations, will improve the organization's ability to prepare to meet the future.

4M Consulting respectfully submits the *Mount Vernon Fire Department Strategic Plan* in the sincere hope that we have, both in process and product, met or exceeded MVFD's expectations. If the City of Mount Vernon has future needs in the area of planning, training, or testing, please contact me.

Sincerely,



Michael B. Sherman, President  
4M Consulting

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Repeated Goal

# Mount Vernon Fire Department Strategic Plan

## ACTION ITEM PROGRESS REPORT

Moved

Responsible Party	#	2006												2007							
		Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
Abel/Incen. Com.	47	5-B-3																			
S. Abel	48		3-B-3																		
C. Love-Johnson	49			4-A-2																	
S. Abel	50			6-A-2																	
S. Abel	51				5-B-4																
C. Love-Johnson	52					4-A-3															
M. Malone	53						4-B-1														
S. Abel	54						6-B-1														
C. Wishert	55							3-C-2													
C. Love-Johnson	56							4-B-2													
S. Abel	57							6-A-3													
C. Wishert	58								3-C-3												
MVFD Staff	59								4-B-3												
S. Abel	60								6-B-2												
S. Abel	61									3-C-4											
Abel & Huschka	62										4-C-1										
MV City Council	63										6-C-1										
Abel & Huschka	64											4-C-2									
Abel & Huschka	65												4-C-3								
Sta. Design Com.	66													6-B-3							
Sta. Design Com.	67														6-B-4						
C. Love-Johnson	68															4-A-2					
MV City Council	69																6-C-2				
C. Love-Johnson	70																	4-A-3			
M. Malone	71																		4-B-1		
C. Love-Johnson	72																			4-B-2	
MVFD Staff	73																				4-B-3

## SUMMARY

Over the last six months, the MVFD planning team worked together in the development of a fire department strategic plan. The high quality strategic planning process and the interaction with MVFD customers turned out to be as valuable as the actual final planning document. This *Mount Vernon Fire Department Strategic Plan* is the product of that planning process and the interaction with the MVFD customers.

The plan reviews all areas and issues that were necessary to set the direction for the future of the fire department. Clear mission, vision, and value statements were formulated that will guide MVFD for many years. The knowledge gained from the customer feedback survey; fire department benchmarking; fire department risk analysis; discussions on acceptable risk; development of strengths, weaknesses, opportunities, and challenges; review of alternatives; and formulating assumptions for the future is a new and valuable asset to the MVFD customers. In addition, the personal contacts between team members and the constituents will set the foundation for improving fire department relationships and communications.

The team used the planning process to develop very clear and measurable goals for the next two to four years. Each goal is broken down into measurable objectives that are further broken down into very specific action items. Each action item has a scheduled completion date and a responsible party assigned to ensure timely completion. Finally, a modified Gantt chart was developed on electronic media for the sole purpose of making the tracking of accomplishments easy for the MVFD staff to review at each fire department meeting. These accomplishments can then be reported to the Mayor, City Council members, and MVFD constituents on a regular basis.

The planning team members worked very hard to stay on track and accomplish this planning endeavor. Volumes of materials were reviewed, discussed, and analyzed. The team discussed all necessary issues to create a clear road map to the future. Many of the issues were difficult to discuss, but they were thoroughly discussed nonetheless.

This *Mount Vernon Fire Department Strategic Plan* is an example of the commitment of the planning team members that worked for the MVFD customers. The team members should support their work by seeing the goals, objectives, and action items accomplished on schedule. The future will be better for all those served by MVFD because of the creation of this guide to the future.

The Mount Vernon Fire Department is truly *Making a Positive Difference*.

**City of Mount Vernon Fire Department  
Customer Feedback Survey**

1. How long have you resided within the City of Mount Vernon? \_\_\_\_\_ Years
2. What is your occupation? \_\_\_\_\_
  - If you own a business, is it within the City limits of Mount Vernon? \_\_\_\_\_
3. Do you currently have, or have you had any official relationship with the Mount Vernon Fire Department (employee, volunteer, vendor, etc.)? \_\_\_\_\_
4. Which of the following services are you aware that the Mount Vernon Fire Department provides?
  - A. \_\_\_\_\_ Fire Suppression
  - B. \_\_\_\_\_ Fire Prevention Programs
  - C. \_\_\_\_\_ Community Fire & Safety Education
  - D. \_\_\_\_\_ Fire Inspections
  - E. \_\_\_\_\_ Business Pre-Fire Plans
  - F. \_\_\_\_\_ Emergency Medical Response
  - G. \_\_\_\_\_ Hazardous Materials Response
  - H. \_\_\_\_\_ Technical Rescue Response
  - I. \_\_\_\_\_ Community Emergency Response Team Training
5. Are you aware of any problems in the above listed areas? \_\_\_\_\_
  - If yes, please explain: \_\_\_\_\_
6. Have you ever received any of the above listed services? \_\_\_\_\_
  - If yes, please explain: \_\_\_\_\_
7. How would you rate the overall services provided by the Mount Vernon Fire Department, on a scale of 1 to 10 (1 being poor and 10 indicating perfection)? \_\_\_\_\_
8. Have you heard any complaints or specific praises concerning the Mount Vernon Fire Department?  
\_\_\_\_\_
  - If yes, please explain: \_\_\_\_\_

(OVER)

**15. Ambulance Transport Information.** (Transporting agencies only)

Cost per individual transport. ALS \_\_\_\_\_, BLS \_\_\_\_\_.

Collection percentage rate for 2003 (using all billings, including write-offs) \_\_\_\_\_.

Total ambulance budget (only dollars not included in #13 above) \_\_\_\_\_.

How many career staff are funded through the ambulance transport fees? \_\_\_\_\_.

**16.** Do you do non-emergency transport or inter-hospital transports? \_\_\_\_yes, \_\_\_\_no

Number per year? \_\_\_\_ Average transport time (time out of district, or unavailable)? \_\_\_\_\_.

**17.** Number of non-combatant administrative personnel? \_\_\_\_\_.

Is ambulance billing done in-house? \_\_\_\_yes, \_\_\_\_no

Is district bookkeeping done in-house? \_\_\_\_yes, \_\_\_\_no

Is payroll done in-house? \_\_\_\_yes, \_\_\_\_no

**18.** Do you have fees for miscellaneous services such as:

Transportation fees? \_\_\_\_yes, \_\_\_\_no      How much? \_\_\_\_\_.

Inspection fees? \_\_\_\_yes, \_\_\_\_no      How much? \_\_\_\_\_.

Permit fees? \_\_\_\_yes, \_\_\_\_no      How much? \_\_\_\_\_.

Other fees? \_\_\_\_\_      How much? \_\_\_\_\_.

**19.** Do you have any programs for the innovative use of volunteers to enhance service to your customers, other than just being paged for calls (i.e. apprenticeships, duty shifts, EMS cadre, prevention cadre, administrative tasks, etc...)? \_\_\_\_yes, \_\_\_\_no.

If so, please explain:

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I would like 4M Consulting to send a collated copy of the survey results to my return address. \_\_\_\_yes, \_\_\_\_no.

Return Address: c/o \_\_\_\_\_

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## Meet the Planning Team



**Steve Abel, Fire Chief:** Steve has been in the fire service since 1973. He is currently the fire chief of the Mount Vernon Fire Department. His professional career includes being an Oregon Deputy State Fire Marshal, full-time fire science instructor, and fire chief. He holds an Associate of Science Degree in Fire Protection and a Fire Administrators Certificate from Western Oregon University. He is currently completing his bachelors degree from Eastern Oregon University. Steve and his wife Cindy have raised three sons, two of which, graduated from Mount Vernon High School. When time allows, Steve and his family can be found sailing in the San Juans and destinations north, in preparation for a world circumnavigation.



**Glenn Ash, City Councilor:** Glenn has lived in Mount Vernon his entire life. He graduated from WWU in 1978 with a BA in Political Science and worked at the Skagit Valley YMCA before joining Doorn & Associates, Inc. Insurance in 1982. Glenn sold that agency last year and began a new career in real estate with Windermere. He is a member of the Skagit Rotary Club, past-president of Sedro-Woolley Chamber of Commerce, United Way of Skagit County, past board member of the Tulip Festival, YMCA, and active member of Trinity Lutheran Church. In 2003, he was elected to his second term of city council. Glenn, his wife, Kristen, and their two children enjoy skiing, fishing, and jogging.



**Glenn E. Brautaset, Assistant Chief:** Glenn is a native of Mount Vernon and began his fire service career in the heart of Skagit County. After graduating from MVHS he pursued an AA in Fire Command, a BA in Fire Service Administration, and a minor in Political Science. Glenn has worked with Leavenworth Fire Department, the Snohomish County Arson Unit, and spent 5 years as a Deputy State Fire Marshal leading Washington State's Fire Investigation Unit. Currently, Glenn is completing his four-year Executive Fire Officer Certification through the National Fire Academy and working toward his Master's Degree.



**Bill DeHon, Firefighter:** Bill and his wife, Jan, have a son and daughter as well as two grandsons. Bill has responded to emergencies for 50 years with Mount Vernon and Cedardale Fire Departments, Skagit County Critical Incident Stress Management Team, Skagit County Support Officers, Mount Baker Ski Patrol, and other agencies. He holds a BA in Arts/Science and a BA in Education, spending 30 years teaching at Wenatchee and Mount Vernon High Schools. He taught First Aid/CPR classes for the Department of Labor and Industries at Skagit Valley College and completed initial EMT training in 1974. In retirement he supervises construction crews that build homes for Habitat for Humanity, continues to snow and water ski, serves on the Endowment Committee at church, and studies investment strategies.





**Harold A. Page, Architect:** Harold and his wife and family have lived in Mount Vernon since 1978. His architect office is in downtown Mount Vernon. Harold participated in the previous MVFD Master Planning process (1992) and has also served in a similar capacity with the Mount Vernon Parks Department. He is chairman of the Mount Vernon Building Department Board of Appeals and serves on the Burlington Design Review Board. He is active in local Community Theater and is on the board of directors for both the Theater Arts Guild and the Skagit Performing Arts Council. Harold and his wife are in love with the Skagit Valley and will never leave.



**Aaron Robbins, Firefighter:** Aaron graduated from Mount Vernon High School in 1986 and from Western Washington University in 1992 with a Bachelor of Education in K-12 Physical Education. Aaron was the assistant football coach from 1990 – 1992 at Mount Vernon High School, the assistant wrestling coach at LaVenture Middle School from 1992 – 1993, and a warehouse manager from 1993 to 1997. Aaron became a career firefighter in 1997 for the City of Sedro Woolley after being a volunteer for 4.5 years. In 1998 he was hired as a career firefighter for the City of Mount Vernon. Aaron and his wife, Stephanie, have two sons, Kurtis, 10 and Kyle, 8. He is currently involved in coaching youth football and baseball, enjoys spending time with family and friends, and enjoys camping and golfing.



**Mike Voss, Captain:** Mike has over twenty years in emergency services; three years as a volunteer firefighter with Mercer Island Fire Department; one and one half years as the full-time EMT on the Mercer Island Marine Patrol; and nineteen years with the Mount Vernon Fire Department (MVFD). At MVFD he was promoted to Lieutenant in 1993 and to Captain in 2003. His major duties are in the areas of safety and health, communications, EMS, and hazardous materials. He is also the Planning Section Chief on the Mount Vernon Incident Management Team. He has an Associate of Technical Arts Degree in Fire Command/Administration from Edmonds Community College. He and his wife, Mary, have been married for 20 years and have two daughters 16 and 18 years old. They enjoy camping and traveling.

## DEFINITION of TERMS

To aid the lay reader when reviewing this plan, this section includes definitions of the terminology used in the *Mount Vernon Fire Department Strategic Plan*.

**Acceptable Risk** – The risk associated with fire loss, emergency response times, delivery system efficiency, and system management that are acceptable to the elected representatives of the City of Mount Vernon.

**Action Items** – The specific individual tasks that need to be accomplished to work toward the accomplishment of more significant objectives.

**Advanced Life Support (ALS)** – The provision of emergency medical care using certified EMT/Paramedic personnel and the necessary equipment and supplies to perform advanced medical intervention in the field.

**Allied Agencies** – The agencies that share some common goals with the fire service and assist the fire department in accomplishing its mission. Allied agencies include but are not limited to college fire science programs, county EMS agencies, emergency managers, and state, county, and local agencies that assist with fire and life safety enforcement.

**Basic Life Support (BLS)** – The provision of emergency medical care using certified EMT-Basic personnel and the necessary equipment and supplies to perform basic medical care in the field.

**Community Emergency Response Team (CERT)** – CERT is an organized group of people who receive special training that enhances their ability to recognize, respond to, and recover from a major emergency or disaster situation. Usually, CERT is organized under the leadership of the local fire department.

**Deployment Process** – This process reviews and analyzes the distribution, type, concentration, and effectiveness of firefighting resources, procedures, infrastructure, and equipment that protect a community. Deployment processes are used to develop, recommend, and eventually adopt a community *Standards of Cover*.

**Effective Response Force** – An effective response force is the minimum amount of staffing and equipment that must reach a specific emergency within a targeted time to mitigate the situation.

**Effective Tax Rate** – The rate applied by a taxing entity to the assessed valuation of real property for the purposes designated in the law concerning that entity. Usually, tax rates are expressed as dollars of tax per thousand dollars of assessed valuation.

**Emergency Medical Technician (EMT)** – A person who has received formal training in pre-hospital and emergency care and is state-certified to attend any ill, injured, or disabled person. There are three levels of EMT: Basic, Intermediate and Paramedic.

**EMT-Basic** – Consists of a curriculum of approximately 140 hours of didactic and clinical study focusing on record keeping, CPR, vital signs, airway management, soft tissue injuries, fractures, shock therapy, childbirth, use of epinephrine, and the use of semi-automatic defibrillators.

## OVERVIEW of the PROCESS

MVFD began their strategic planning process by first soliciting the opinions of their customers through a resident feedback survey. Local residents were asked to complete a questionnaire concerning fire department operations and services. The fire chief and the consultant discussed draft survey questions until a final version was approved. The information obtained from the resident feedback survey and the impact that feedback had on MVFD services were discussed at the beginning of the first phase of the strategic planning process. A copy of the resident feedback survey is included at the end of this plan as Appendix #1 in section 12.

Prior to the first planning session, a comparable fire department analysis was completed. Twelve fire departments (including MVFD) were selected for comparison, based on demographics that paralleled those of MVFD. A survey was developed and mailed to each department in May 2004 covering questions on demographical data, response data, and general information on budgets, personnel, EMS/ambulance services, and fire prevention activity. A copy of the fire department benchmark survey is included at the end of this plan as Appendix #2 in section 12.

A thorough analysis of the data received from the comparable departments was conducted with follow-up phone calls to verify any abnormalities in the data. Graphs and charts were created to highlight different aspects of the analysis. Additional data was received from MVFD staff on fire department responses, target hazards, and barriers to fire protection, etc. All the above data was used as a basis for discussions about the risk analysis and what would be an acceptable level of risk for MVFD patrons. This data was also the beginning of the research needed for MVFD to develop an official *Standard of Cover*.

At the first strategic planning session, an eight-hour session, the customer feedback information was discussed. Discussions focused on the perceptions of fire department customers and the possible background for those perceptions. In addition to the customer feedback survey, a review of the benchmark analysis led to the discussion of the information needed to fully develop the risk analysis. This information will be used in the MVFD Deployment Process that will conclude with the official adoption of the MVFD *Standard of Cover*. The last half of the first session was devoted to developing lists of customers and their needs as well as department functions and services. The final portion of the first phase of the strategic planning process was a three-hour meeting with the MVFD staff representatives to assign the necessary research to gather the final information to complete the risk analysis. An outline for completing a MVFD

setting process and assigning individuals to solicit goal statements from the different customer groups. Goal solicitation sheets were distributed to each planning team member and instructions were reviewed for soliciting potential goal input from key fire department customers. Thirty-five individuals that were contacted by team members each returned between one and dozens of potential fire department goals. The input covered solicitation from all areas of the planning team representation: business, citizen, volunteer, management staff, and paid line staff.

The final phase of the process began with an evening review of approximately 300 potential goal statements that were solicited from the representation of fire department customers. The customer input filled fourteen pages of information to be reviewed by the planning team. After the review, three computerized prioritization methodologies were used to create a true consensus of the planning team's priorities. Each team member rated the potential goals using all three prioritization methodologies. A computerized collation of the entire team's consensus priorities for all three methodologies was then discussed and finalized. The top achievable goals were selected for the next day's planning session.

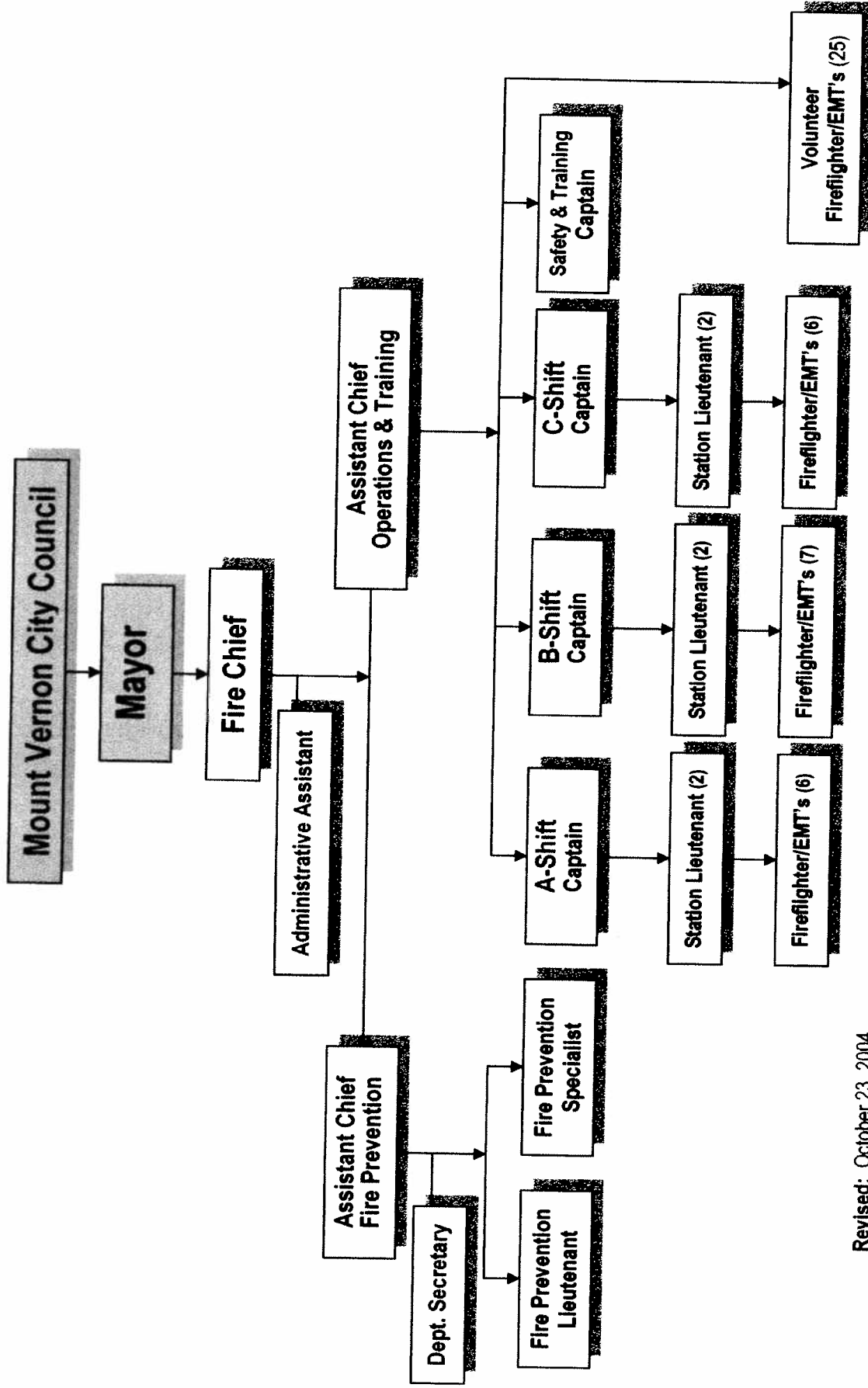
After the evening session, the team members were sent home to continue to review the potential goals and develop their thoughts about the necessary objectives to accomplish those goals. The final session, the next day, was an all day session that was used to develop the objectives and action items for completing the top seven goals from the previous prioritization session. The last two goals were specifically selected to dovetail fire department goal accomplishment with the direction set out in the *City of Mount Vernon Business Plan*.

Team member biographies, the strategic plan table of contents, a draft cover, the modified-Gantt chart, and the definition of terms were finalized during and shortly after the last planning session. Planning team member Harold Page designed the original draft strategic plan cover concept while MVFD staff and the consultant worked to finalize the cover and printed the necessary copies. After all processes were completed, a draft copy of the final strategic plan was developed. Select planning team members volunteered to review final drafts of the strategic plan document to ensure accuracy. After the draft documents were reviewed and adjusted by the planning team members, the final document was printed for the public presentation.

On January 5, 2005, the consultant made a public presentation of the *Mount Vernon Fire Department Strategic Plan* to the Mount Vernon Public Safety Committee. Thirty copies of the final comb-bound plan were delivered to the fire chief at the completion of the MVFD strategic planning process.

# Mount Vernon Fire Department

## Organization Chart



Revised: October 23, 2004

When asked to rank emergency medical issues in order of importance from #1 to #4, the customers' order of importance was calculated as follows:

1.30 – Rapid response times (five minutes or less)

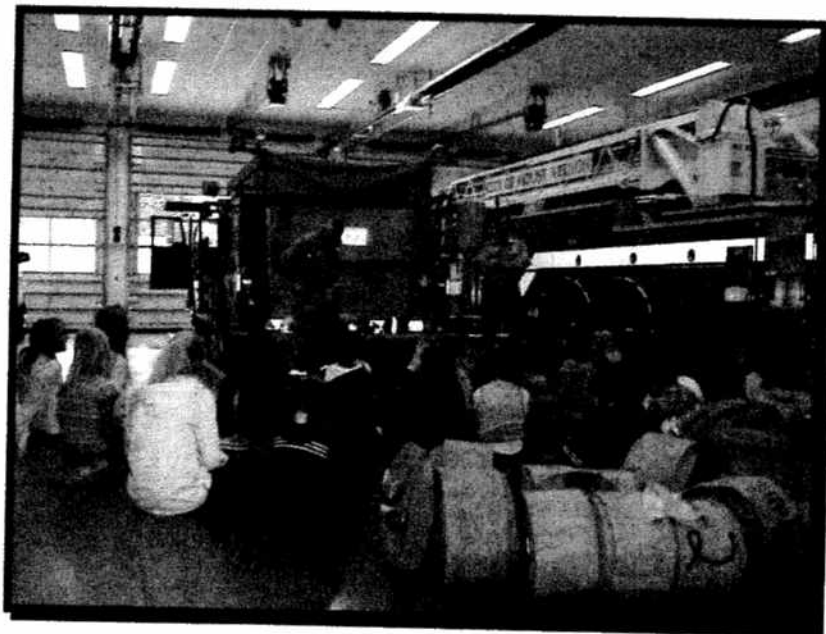
2.16 – Having a paramedic/firefighter on the first arriving response unit

2.24 – Progressive training for firefighter/EMT's relating to medical emergencies

2.95 – “State of the art” equipment (medical equipment and tools)

When asked, “If your city fire department had the option for more efficient transport services than are currently provided, on a scale of 1 to 10, how important is this to you?” (1 being least important and 10 being the most important); 146 (91.8%) customers responded with an average level of importance to them of 7.8. Nine customers made additional comments on this question, with the comments being divided between those supportive of the existing EMS system, those favoring a change to MVFD based services, and those that were neutral.

Fifty-eight (36.5%) of the respondents listed additional comments at the end of the survey. These comments ranged from general praise to minor constructive criticism of MVFD operations, with the strong majority being supportive. Most of the specific suggestions revolved around either support for a MVFD ambulance service or support for the existing ambulance service. Overall the customer feedback was very positive and supportive of MVFD operations.



better than the rural area average of ISO #7. The Insurance Services Office (ISO) rates the nation's fire departments on a scale of 1 – 10, with 1 being perfect and 10 being non-existent. The Northwest has few ISO #2's and even less fire departments with the ISO #1 rating. Most small city fire departments will range from an ISO #3 to an ISO #6.

In 2003, MVFD responded to 3,010 calls, with 63% of those being medical responses. This compares to the benchmark comparable average of 3,131 calls and 76.9% of those being medical responses. The MVFD number of calls (111.23 per 1000 population) is significantly above the benchmark comparable average (93.96 per 1000 population).

MVFD is slightly above the comparable average of paid firefighters (MVFD = 33, average 31.1), yet has the lowest level of staffing for engine companies of the seven comparable fire departments and the additional fire department that submitted late. MVFD staffs fire engines with two personnel while the comparable average was 2.8 personnel. These numbers reflect the conscious decision by the City of Mount Vernon to provide fire and EMS services to their customers from three fire stations with two-person engine companies. The only other department in the comparable fire departments to provide service from three fire stations was Longview, Washington. Longview provided their services with 41 personnel, while Mount Vernon provides similar services with 33 personnel. Longview used those 8 additional staff to provide three personnel on each engine. The Longview Fire Department has an ISO rating of 3, while MVFD is an ISO #4. The average number of fire stations serving the comparable fire departments was 2.3.

The number of volunteer firefighters at MVFD is similar to the benchmark comparable average (MVFD = 25, average 24.2). The MVFD annual fire loss over the past five years (\$345,917) is significantly below the benchmark average (\$443,230).

MVFD had a very high number of annual fire inspections (1,395) in comparison to the benchmark comparable average of 979. This may account for some of the high customer awareness of fire prevention activities listed in the customer feedback survey results. The MVFD number of annual public education programs (118) was above the average of 68, another indication of the activity level of the MVFD fire prevention division. MVFD has three full-time staff members assigned specifically to fire prevention as compared to the benchmark comparable average of 1.11 full-time equivalent (FTE) positions. At MVFD, as with many other fire departments, shift career staff and volunteers assist with fire prevention activities in addition to those assigned specifically to the prevention division full-time.

## RISK ANALYSIS - Process

In completing an assessment of current risk to develop discussions on acceptable risk, *4M Consulting* used a process that evaluated the current situation both in resources available, risk of the built-up environment, resource capability, and statistics related to service. Cost figures were also analyzed for current resources and services. This information was then compared to a series of benchmarks and established data about risk and the response time continuum that provided a reference for planning team members. In addition, a standard outline for the purpose of completing a risk analysis for a MVFD Deployment Process was used to direct research to obtain the necessary data for a complete risk analysis. This outline included target hazard occupancies, fire demand zones, response times, distribution and concentration of resources, and resource capabilities.

To set the stage for completing a thorough community risk assessment, the components of risk assessment must be understood. In addition, the basis for setting *Standards of Cover* for emergency response must be completely discussed so that the specifics of the coverage in Mount Vernon can be compared to established criteria before making recommendations. To that end both subjects above will be explained at the beginning of this risk analysis section. After the above information is presented, the component parts of the situation that exists in Mount Vernon that will affect resource deployment recommendations will be clearly delineated.

This chapter presents the data necessary for key decision makers to review the existing risks, the probabilities and consequences of that risk occurring, the current capabilities, the cost of the current situation, and the potential to make positive changes to reduce risk if desired.

### Risk Assessment

#### Community Risk Assessment

The evaluation of fire risk must take into account both the frequency and severity of fires and other significant incidents. Determining risk by analyzing the real world factors in the service area is essential to the development of a workable fire/emergency medical services plan.

The following diagram illustrates the process of risk assessment, which weighs the probability an event will occur again and the possible consequences of that event if it were to occur. We have divided risk assessment into four quadrants. Each quadrant imposes different requirements for the commitment of resources in the service area.



There are many factors that make up risk: the ability of occupants to take self-preserving actions, construction features, built-in fire protection, available water supply, and the nature of the occupancy or its contents. Therefore, defining community risk is essential to determining the level of service the fire department should provide. The level of service should be based on the fire department's ability to handle the types and sizes of calls that are reasonably expected to occur now and in the near future.

### Occupancy Risk Assessment

*The MVFD service area has a wide range of potential risks. There is an inverse relationship between risk and frequency. Daily events are usually found in the routine risk category, and less frequent events are in the highest risk levels. If the risk management system is working, a truly major loss should be an extraordinary event. In most cases, the majority of losses occur in the smallest percentage of emergencies. Fire incidents that become a significant event usually have experienced flashover.*

**The objective of risk assessment is to reduce the truly serious loss to a very unusual event.** This involves trying to keep routine emergencies from becoming serious loss situations by distributing the resources needed to respond to the anticipated event throughout the service area. The first step in determining risk is to divide existing and future land uses into categories according to the level of risk associated with them.

### Risk Categories

#### *Maximum Risk (Category 1)*

A **maximum** risk occupancy is of substantial size and contains a concentration of properties that present a very high risk of loss of life, loss of economic value to the community, or major damage to property in the event of fire. Normally, these structures lack built-in fire protection features and/or contain occupants not capable of self-preservation. Examples of such areas include:

- a. Main shopping and business centers, large department stores, shopping malls and multi-story hotels, and office properties
- b. Concentration of theaters, cinemas, clubs, dance halls, and other entertainment centers
- c. Concentration of high-risk industrial or commercial property

**Moderate Risk (Category 4)**

A **moderate risk** or “routine risk” occupancy contains built-up areas of average size, where the risk of life loss or damage to property in the event of a fire is usually limited to the occupants, although in certain areas, such as small apartment complexes, the risk of death or injury may be relatively high. Examples of such areas include:

- a. Detached, single-family housing, including estates and smaller multi-story dwellings
- b. Attached multi-family, two-story dwellings, with the property accessible to pre-connected attack lines
- c. Suburban terraced, semi-detached, multi-occupancy, residential properties
- d. Mixed low-risk industrial buildings
- e. Industrial or commercial structures under 10,000 square feet without high-hazard or high fire load contents
- f. Strip shopping centers and typical business areas

Due to the frequency of emergencies in this risk category, the moderate/routine risks are the greatest factor in determining MVFD fire station locations and staffing. The typical risk is often used to determine minimum needed resources for the events most likely to occur. ***This is the predominant risk category within the service area of MVFD.***

**Low /Remote Risk (Category 5)**

These may be classified as a **low risk** occupancy and do not present a high risk of death or large fire loss in the event of a fire. Examples include:

- a. Small commercial structures that are remote from other buildings
- b. Detached residential garages
- c. Sheds, outbuildings, etc., or other “remote rural risks” if they are isolated from any centers of population and contain few buildings. These include for example, rural land with no occupied structures and recreational areas.

In order to establish a service area risk profile, the occupancy types in the service area should be broken down into groups and assigned to fire demand zones. In the initial establishment of the *Standards of Cover*, MVFD staff delineated what they felt were the higher risk type occupancies. While this review and assessment is adequate for the initial risk profile, a more comprehensive study should be conducted in the future for all occupancies.

## *Standards of Cover - Overview*

A critical element in the assessment of any fire/EMS delivery system is the ability to provide adequate resources for anticipated fire combat situations and medical emergencies. Each fire/EMS emergency requires a variable amount of staffing and resources to be effective. Properly trained and equipped fire companies must arrive, deploy, and attack the fire within specific time frames if successful fire ground strategies and tactical objectives are to be met. The same holds true for rescue operations, major medical emergencies, and other situations that require varying levels of resources.

Controlling a fire before it has reached its maximum intensity requires a rapid deployment of personnel and equipment in a given time frame. The higher the risk, the more resources needed. For example, more resources are required for the rescue of persons trapped within a high-risk building with a high-occupancy load than for a low-risk building with a low-occupancy load. More resources are required to control fires in large, heavily loaded structures than in small buildings with limited contents. Therefore, creating a level of service requires making decisions regarding the distribution and concentration of resources in relation to the potential demand placed upon them by the level of risk in the community.

### Fire Suppression Capabilities

Firefighters encounter a wide variety of conditions at each fire. Some fires will be at an early stage and others may have already spread throughout the building. This variation in conditions complicates attempts to compare fire department capability. A common reference point must be used so that the comparisons are made under equal conditions.

In the area of fire suppression, the service level objectives are intended to prevent the fire from reaching **FLASHOVER**, a particular point of a fire's growth that marks a significant shift in its threat to life and property. Firefighting tasks that are required at a typical fire scene can vary greatly. To save lives and limit property damage, fire companies must arrive within a short period of time with adequate resources to do the job. Providing the proper resources within a specific time period is a great challenge. This is also true from an emergency medical perspective where the service level objective is typically to intervene within four to six minutes when people are pulseless and/or not breathing. If this is not accomplished within this time period, brain damage is very likely to occur due to lack of oxygen. In a cardiac arrest situation, survivability dramatically decreases beyond four minutes without appropriate intervention.

As suggested previously, the number of times that fires are controlled before flashover depends on the entire fire protection system and is not solely dependent on emergency response forces. Built-in fire protection, public education, extinguishment by citizens, and even the consumption of fuel by the fire itself are all factors that affect flashover.

Even when fires are not extinguished by firefighting forces, these personnel often provide other services, ranging from smoke removal to the restoration of built-in control systems. The key point is that all components of the fire protection system, from public education to built-in fire protection to manual fire suppression, must be maintained.

Flashover is a critical stage of fire growth as it creates a quantum jump in the rate of combustion and a significantly greater amount of water is needed to reduce the burning material below its ignition temperature. A fire that has reached flashover means it is too late to save anyone in the room of origin, and a greater number of firefighters are required to handle the larger hose streams needed to extinguish the fire. A post-flashover fire burns hotter and moves faster, compounding the search and rescue problems in the remainder of the structure, at the same time that more firefighters are needed for fire attack.

### The Significance of Flashover

#### Pre-Flashover

Usually limited to one room  
Requires smaller attack lines  
Search and rescue is easier & quicker  
Initial assignment usually can handle

#### Post-Flashover

Most likely will spread beyond one room  
Usually requires more & larger attack lines  
Compounds search and rescue efforts  
Requires additional firefighting companies

- a. Staffing and equipment needs can both be reasonably predicted for different risk levels and fire stages. The correlation of staffing and equipment needs with fires according to their stage of growth is the basis for response coverage.
- b. The goal is to maintain and strategically locate enough firefighters and equipment so that a minimum acceptable response force can reach a reasonable number of fire scenes before flashover, and in medical events to intercede in critical medical emergencies prior to the occurrence of irreversible damage.
- c. This goal is attainable, given timely notification to dispatch.

### Effective Response Force

An effective response force is the minimum amount of staffing and equipment that must reach a specific emergency within a targeted time to mitigate the situation. This effective response force should be able to handle the typical emergency medical incident or fire that is reported shortly after it starts and that response must be within the maximum prescribed response time for the type of medical emergency or risk level of the structure. Considering that the fire department cannot hold fire risk to zero or successfully resuscitate every patient, the response objective should find a balance between effectiveness, efficiency, and reliability that will keep fire risk at a reasonable level and maximize the potential for saving lives and property (acceptable risk) at an acceptable cost.

## Response Time

### Elements of Response Time

Developing *Standards of Cover* must take into account not only the significance of flashover but also other factors such as the time/temperature relationship in a structure fire. This is also true with cardiac arrest events. The relationship between the time of medical intervention and cardiac patient survival is dependent on the time when external defibrillation is applied.

Various scientific models have been developed to correlate the relationship between time and the ability to successfully mitigate emergency events. The window of opportunity for both fire and critical medical emergencies to effectively intervene is narrowly defined.

Recognition must be given, however, to the *point of awareness* within these various models. In the instance of residential dwelling fires as shown through fire modeling studies conducted by the Southwestern Research Institute on smoke alarm activation, flaming ignition does not normally occur until approximately 18-20 minutes after initiation of the event. From this point of awareness, conditions deteriorate rapidly with maximum temperatures and flashover occurring within an 8-10 minute time frame. Flashover can occur in as little as four minutes from this point of awareness depending upon the type of combustible material involved.

In a cardiac arrest, the point of awareness is the recognition of the patient's condition. The arrival of defibrillator-equipped personnel within the first four minutes before heart damage occurs greatly increases the chances of survival. In the absence of other mitigating strategies, response time has a direct relationship to the critical time interval for fire and medical emergencies with respect to outcome, patient survival, or property saved.

## RISK ANALYSIS – MVFD Status

### Current Risk

#### Target Hazard Occupancies

MVFD provides fire suppression, prevention, education, and emergency medical service to approximately 27,000 residents within the city limits of Mount Vernon and a small fire district within and adjoining the city. The fire department encompasses a service area of twelve square miles. Major transportation routes such as Interstate Highway 5, the Burlington Northern Railroad (seven crossings), and the Skagit River traverse the fire department's response area. In most cases, the fire station placement is such that both sides of these barriers are covered. The services of MVFD are augmented by automatic and mutual aid from surrounding areas and MVFD provides those services in return to the same areas. On major target hazards in Mount Vernon and the surrounding communities these agreements for outside aid assists the fire departments in providing the necessary firefighting capabilities. MVFD responded to 3,010 calls in 2003.

Target hazards within the MVFD response area are hazards that require more expertise or response capability than a standard house fire. These hazards are assigned an Occupancy Vulnerability Assessment Profile Score (OVAPS) by MVFD to indicate the severity of the hazard. This score is based on the factors presented by the building, life safety considerations, overall risks, water supply, and value to the community. **Building factors** that would be considered are: other adjacent exposed buildings, the type of construction of the facility, the building height, the fire department's ability to access the building, and the total floor area. **Life safety considerations** include: the occupant load, the ability of occupants to be mobile, the alarm alerting capability to warn occupants, and exiting capability available to the occupants. **Overall risks** include: the past experience at that location, the types of activities that transpire at that location, fire and life safety inspection frequency, types of hazards on-site, the capacity to be able to control a fire at that location, and the overall fire load in the facility. **Water supply** includes: available fire flow, needed fire flow, and existing sprinkler systems. The **value to the community** includes: the personnel at the site, the economic value to the community, the value of the infrastructure, and the historical value.

Target hazards noted within the MVFD coverage area with their associated OVAPS were as follows (the ordering of the following list **DOES NOT** indicate priority of importance as a target hazard):

17	0126N	This zone is Interstate 5 northbound from Kincaid to College Way. Primary and secondary responses are from Station 1 and Station 2 respectively.
18	0126S	This zone is Interstate 5 southbound, Kincaid to Anderson Rd. Primary and secondary responses are from Station 1 and Station 2 respectively.
19	0127N	This zone is Interstate 5 northbound from College Way to the Skagit River Bridge. Primary and secondary responses are from Station 2 and Station 1 respectively.
20	0127S	This zone is Interstate 5 southbound, College Way to Kincaid. Primary and secondary responses are from Station 1 and Station 2 respectively.
21	0129S	This zone is Interstate 5 northbound from the Skagit River Bridge to College Way. Burlington FD provides automatic mutual aid because of accessibility. Primary and secondary responses are from Station 2 and Station 1 respectively.

## Staffing Deployment

### Administrative Staffing

The entire system of providing management and control within MVFD appears more than adequate with professional leadership consisting of a fire chief, an assistant chief fire marshal, and an assistant chief in charge of training and operations. Even though the management and control appears to be well covered by current administrative staff, many administrative functions are delayed due to the administrative staff being pulled away during the normal workday to handle significant issues or to assist at emergencies. Also, after hours response by administrative personnel adds stress in regard to administrative goal accomplishment.

Fire prevention, public education, plans review, and fire investigations are handled by staff members assigned to the fire prevention division that work directly under the supervision of the assistant chief fire marshal. The fire marshal, a secretary, a fire prevention lieutenant, and a fire prevention specialist are responsible for the workload indicators that were significantly higher than those of the comparable fire departments used in the benchmark survey. In 2003, the prevention division reported 1,396 fire prevention code inspections and 4,212 public education contacts. The projected numbers for the year 2004 were 1,200 and 5280 respectively. It appears the workload in the area of public education is projected to increase to such a level as to prevent the limited fire

The core of the fire department training program is designed to maintain proficiency in MVFD base skills for the following:

- NFPA FF1 and FF2;
- Technician level for vehicle rescue;
- Operations level for technical rope rescue;
- Hazardous materials response;
- Equivalency with Rescue Systems 1 curriculum (building collapse and heavy lifting);
- Awareness levels for confined space, trench rescue, and water rescue; and
- Awareness level for weapons of mass destruction.

Many of the skill and knowledge areas are revisited annually and all of the subjects are addressed at least every three years. Most career members have been trained to NFPA Fire Officer 1 or its equivalent. This has been accomplished through in-house training and attendance at various fire officer academies (metro fire officer academy Portland, Oregon and other similar training institutes). In the past couple of years MVFD has identified the need for better fire officer training and certification of skills. Incorporated into the current MVFD in-service firefighter training program is increased training on Fire Officer 1 skills for all career members. On a quarterly basis, Fire Officer 2 training is conducted for all MVFD sworn fire officers. This in-house training provides not only skill maintenance but an opportunity for career members to complete the educational component of the IFSAC certification requirement for Fire Officer 2. Each subject area is addressed at least every three years.

Most career members are certified as emergency medical technicians (EMT). A few career members are certified as first responders. A bridge program has been designed to bring all career members to the EMT certification level. This is an on-going program and should be completed in the spring of 2005. Volunteer members are, at a minimum, trained to the advanced first aid level including automatic defibrillation. When a volunteer completes their probationary year, they are eligible for EMT training. Approximately half of the MVFD volunteers take advantage of this medical training opportunity.

The MVFD on-going medical training program is designed to meet state and local requirements for recertification. A dedicated group of in-house EMS instructors provide the bulk of this training. Additionally, continuing education is provided through in-service training on all subject areas within the EMT curriculum. Each subject is addressed a minimum of every three years.



responses. The dispatch center provides unit specific dispatching for MVFD and one other fire department in the county. This allows personnel and equipment to be deployed specifically for the type of call and the response zone of the call. By doing this type of dispatching the proper resources can be deployed quickly and units that are not needed can remain in their first due area for subsequent emergencies. Volunteer and off duty career personnel, when needed, are toned to respond to the stations to staff additional equipment. Advanced Life Support transport services are available to the area through a countywide EMS/ambulance system.

In addition to the emergency workload, the overall workload indicators for MVFD staff were documented at the April 29, 2004 captain's meeting as producing a resource utilization ratio (RUR) of approximately twelve hours per full time equivalent employee per shift. This ratio takes into account routine duties, training, company inspections, public education events, equipment maintenance, record keeping, physical fitness activities, and emergency calls. Fire department personnel assigned to 24 hour shifts normally have utilization ratios higher than most jobs, but 12 hours per employee is a significantly high RUR.

### Staffing Patterns

<u>Weekdays</u>	<u>After 5 PM Weekdays/Weekend/Holidays</u>
3 on-duty chiefs* 2 on-duty line personnel (captain & prevention)	1 off-duty chief as duty officer
<u>All Three Stations</u> 1 fire officer (captain or lieutenant) 1 firefighter/EMT Basic (24hr. paid) Volunteers from home or work	<u>All Three Stations</u> 1 fire officer (captain or lieutenant) 1 firefighter/EMT Basic (24hr. paid) Volunteers from home or work
<i>*Denotes that there is a maximum of 3 and a minimum of 1 chief officer available on any given weekday. Each chief has program responsibilities that may require them to be unavailable for emergency response on occasion. When available, chief officers respond to emergencies as needed.</i>	

### Effective Firefighting Response Force

Firefighters encounter a wide variety of conditions at each fire. Some fires will be at an early stage and others may already have spread throughout the building. This variation in conditions complicates attempts to compare fire department capability. A common reference point must be used so that the comparisons are made under equal conditions. In the area of fire suppression, the service level objectives are intended to prevent the fire from reaching **THE FLASHOVER POINT**, a particular point of a fire's growth that marks a significant shift in its threat to life and property. Firefighting tasks that are required at a typical fire can vary greatly. What fire companies must do, simultaneously and quickly if they are to save lives and limit property damage, is to arrive within a short period of time, with adequate resources to do the job.

This is also true from an emergency medical perspective. The service level objective is typically to intervene within **FOUR-SIX MINUTES** when people are pulseless and/or not breathing. If not accomplished within this time period brain damage is very likely to occur because of lack of oxygen. In a cardiac arrest situation, survivability dramatically decreases beyond four minutes without appropriate intervention.

The planning team discussed the differences between the fractal response times, average response times, and the fact that the initial two person response used by MVFD created some misleading statistics. The initial response times look almost acceptable, but the actual delivery system degradation and unacceptable risk was coming from the time it took to assemble an effective firefighting force on scene to perform necessary tasks. The difference between assembling that type of force for any emergency, two at a time, greatly affects emergency scene safety and the delay before necessary operations to mitigate the emergency can be carried out. Therefore, the current deployment practices may exacerbate the potential for high scene response times, higher workload, increased danger, and increased fire and life loss. To illustrate this point, an on-scene personnel analysis is provided as a table in this section.

A critical element in the assessment of any fire/EMS delivery system is the ability to provide adequate resources for anticipated fire combat situations and medical emergencies. Each fire/EMS emergency requires a variable amount of staffing and resources to be effective. Properly trained and equipped fire companies must arrive, deploy, and attack the fire within specific time frames if successful fire ground strategies and tactical objectives are to be met. The same holds true for rescue operations, major medical emergencies, and other situations that require varying levels of resources.

Commercial Building or Apartment Fire: 20 personnel needed within 8 minutes to accomplish the following tasks:  
(1,500 GPM Fire Flow)

Incident Command (1)  
Safety/Recon (1)  
2 Fire Attack Hose Lines (6)  
Back-up Line (2)  
Standby/RIT (3)  
Ventilation (3)  
Exposure Protection (2)  
Pump Operators (2)  
Aerial Ladder Operator (1)

The above does not include the following tasks: water supply, building evacuation (4 personnel, minimum, at an apartment fire), rehab and air supply, and care for occupants. An additional 9 personnel (3 crews) are needed for crew rotation. MVFD standard response is: 1 duty chief, 2 engines (2 FF's each), 1 ladder (2 FF's), 1 rescue (2 volunteers). **Average personnel responding: 9.**

***MVFD STANDARD FIRST ALARM COMMERCIAL FIRE RESPONSE***  
Fire Flow of 1000 G.P.M.

<i>FIRE APPARATUS RESPONDING</i>	<i>MINIMUM APPARATUS STAFFING</i>
1 Duty Officer	1
3 Fire Engines	6 (one engine is mutual aid)
2 Aerial Ladder Trucks	4 (one aerial is mutual aid)
1 Rescue Truck and/or Squad	2 Volunteers
<b>7 TOTAL</b> (2 mutual aid)	<b>13 TOTAL</b> (4 mutual aid)

Even with mutual aid, the standard MVFD response to a commercial structure fire is six pieces of apparatus and thirteen firefighting personnel. It must be noted that mutual aid responding to MVFD calls has an average response time of eleven minutes. As stated in the 1992 master plan, "The Mount Vernon Fire Department should have realistic expectations for mutual aid." It is unrealistic to expect mutual aid companies from fire departments surrounding Mount Vernon to be part of the initial fire attack force. The MVFD initial attack force is unable to produce the fire flow needed for most commercial structures within their response area, making the initial response time and quick fire attack even more important. If the fire is not stopped before it exceeds the fire flow that can be produced by firefighting crews, the fire will burn freely until the proper fire flow is produced or the fire consumes the combustible material down to a level that can be handled with the fire flow available.

***THE FOLLOWING LIST IS ORGANIZED IN ALPHABETICAL  
FORMAT, NOT INDICATING IMPORTANCE OR PRIORITY.***

## **Customer Needs**

- ⇒ Accessibility to fire department staff
- ⇒ Adequate capacity of staff for access
- ⇒ Adequate staff to meet needs
- ⇒ Collaborative problem solving among staff
- ⇒ Community rooms
- ⇒ Cost effective and consistent services
- ⇒ Effective emergency communications
- ⇒ Emergency management
- ⇒ Excellent value for resources expended
- ⇒ Hazardous materials response
  - Confined space rescue
  - Technical rescue
- ⇒ Information on emergency services
- ⇒ Pride of high quality services
- ⇒ Prompt and accurate dispatch services
- ⇒ Rapid response
- ⇒ Skilled EMS personnel
- ⇒ Skilled firefighters

## FUNCTIONS and SERVICES

*THE FOLLOWING LIST IS ORGANIZED IN ALPHABETICAL  
FORMAT, NOT INDICATING IMPORTANCE OR PRIORITY.*

### **Functions**

- ⇒ Budget administration
- ⇒ Code updates
- ⇒ Communication system maintenance
- ⇒ Facilities and equipment maintenance
- ⇒ Interdepartmental relations
- ⇒ Personnel management
- ⇒ Planning
- ⇒ Public relations
- ⇒ Purchasing and supplies
- ⇒ Record keeping
- ⇒ Research and development
- ⇒ Safety and health administration
- ⇒ Training

## STRENGTHS and WEAKNESSES

*THE FOLLOWING LIST IS ORGANIZED IN ALPHABETICAL  
FORMAT, NOT INDICATING IMPORTANCE OR PRIORITY.*

### Strengths

- ⇒ 24 hour fire department staffing
- ⇒ “Can do” attitude of staff
- ⇒ City support infrastructure
- ⇒ Community pride in fire department equipment
- ⇒ Community pride in fire department facilities
- ⇒ Good community support
- ⇒ Good water supply
- ⇒ Innovative staff
- ⇒ Labor/management relations
- ⇒ MVFD’s support of mutual aid partners
- ⇒ Prevention program
- ⇒ “Pride in Service”
- ⇒ Professional
- ⇒ Professional image
- ⇒ Public education of fire department operations
- ⇒ Rapid response
- ⇒ Supported financially
- ⇒ Technical expertise and willingness to share
- ⇒ Training program and willingness to share

**THE FOLLOWING LIST IS ORGANIZED IN ALPHABETICAL  
FORMAT, NOT INDICATING IMPORTANCE OR PRIORITY.**

## **Threats**

- ⇒ Changes in elected officials
- ⇒ Citizens' initiatives limiting or decreasing resources to provide services
- ⇒ City emergency management (Competing)
- ⇒ Competing community needs
- ⇒ Critical changes outside comfort zones
- ⇒ EMS
- ⇒ Loss of commercial base
- ⇒ Overextending resources
- ⇒ Privatization
- ⇒ Regulations/unfunded mandates



## VALUE STATEMENTS

The planning team developed short descriptive statements that represent the corporate values of MVFD. This is usually the most overlooked feature of any planning process, yet it may well be the most important. The value statements establish the basis for all ground rules in the implementation of the plan. The following list of values is organized in alphabetical format, not indicating priority:

### Communications

We value honest two-way communication that is timely, informative, encouraging, mutually respectful, and that reinforces organizational direction.

### Facilities and Equipment

We value facilities and equipment that are well maintained and allow us to proficiently and safely meet the needs of the community.

### Leadership

We value leadership that promotes a strong and consistent organization; allows flexibility, individual responsibility, and accountability; provides positive direction; and fosters community support.

### Relationships

We value positive, progressive, team oriented relationships within MVFD, the City of Mount Vernon, the community, and neighboring agencies.

### Staffing

We value the appropriate number of competent personnel to proficiently and safely deliver the MVFD services and promote a positive team spirit and progressive attitude.

### Training and Opportunities

We value the opportunities and challenges of protecting our community as well as the high levels of training, mentoring, and professional development that allows us to make a difference.



# 1. Develop and Implement MVFD Staffing to Meet the Needs of Mount Vernon

## Objective A. Develop and Adopt a Standard of Cover for MVFD

### Action Items

1. **Appoint a deployment committee**  
Responsible Party: S. Abel  
Completion Date: Jan. 2005
2. **Review, collect, and analyze deployment data**  
Responsible Party: Deployment Committee  
Completion Date: Apr. 2005
3. **Present the recommended MVFD Standard of Cover to the city council**  
Responsible Party: Deployment Committee  
Completion Date: June 2005
4. **Adopt a MVFD Standard of Cover**  
Responsible Party: City Council  
Completion Date: July 2005

## Objective B. Develop a Recommendation to the City Council on Fire Prevention Staffing

### Action Items

1. **Analyze and document fire prevention division's staffing needs**  
Responsible Party: G. Brautaset  
Completion Date: Apr. 2005
2. **Present recommendations to the labor/management committee**  
Responsible Party: G. Brautaset  
Completion Date: May 2005
3. **Present the recommendations to the city council**  
Responsible Party: S. Abel  
Completion Date: June 2005
4. **Adopt fire prevention staffing recommendations**  
Responsible Party: City Council  
Completion Date: July 2005

## Objective C. Review, Analyze, and Make Recommendations on Accomplishing Additional Duties and Support Tasks

### Action Items

1. **Appoint a committee for review of MVFD support services' needs**  
Responsible Party: M. Malone  
Completion Date: Jan. 2005
2. **Review and analyze data concerning support services**  
Responsible Party: Support Services Committee  
Completion Date: Apr. 2005
3. **Make recommendations to the fire chief concerning support services**  
Responsible Party: Support Services Committee  
Completion Date: May 2005
4. **Make recommendations to the city council concerning support services**  
Responsible Party: S. Abel  
Completion Date: June 2005
5. **Adopt MVFD support services recommendations**  
Responsible Party: City Council  
Completion Date: July 2005

## 4. Improve and Broaden MVFD's Financial Support

### Objective A. Explore and Delineate Alternative Revenue Sources to Diversify MVFD's Financial Support

#### Action Items

1. **Establish management meeting agenda for brainstorming revenue sources**  
 Responsible Party: C. Love-Johnson      Completion Date: Jan. 2005
2. **Document potential revenue sources for further review**  
 Responsible Party: C. Love-Johnson      Completion Date: June 05, 06, 07
3. **Conduct further research on specific revenue sources as determined**  
 Responsible Party: C. Love-Johnson      Completion Date: Aug. 05, 06, 07

### Objective B. Review and Delineate Potential Efficiencies to Reduce MVFD's Costs

#### Action Items

1. **Conduct an off-site captain's meeting to brainstorm potential efficiencies**  
 Responsible Party: M. Malone      Completion Date: Sept 05, 06, 07
2. **Document potential efficiencies**  
 Responsible Party: C. Love-Johnson      Completion Date: Oct. 05, 06, 07
3. **Conduct further research as needed on potential efficiencies**  
 Responsible Party: MVFD Staff      Completion Date: Nov. 05, 06, 07

### Objective C. Explore and Make Recommendations on Using Existing Trust or Establishing a Non-Profit MVFD Foundation

#### Action Items

1. **Review potential options for a trust/foundation**  
 Responsible Party: S. Abel & A. Huschka      Completion Date: Jan. 2007
2. **Select foundation/trust option**  
 Responsible Party: S. Abel & A. Huschka      Completion Date: Feb. 2007
3. **Make recommendation on establishing a foundation/trust**  
 Responsible Party: S. Abel & A. Huschka      Completion Date: Mar. 2007

## Fire Department Benchmark Survey

Please complete the following survey questionnaire and return it in the stamped, self-addressed envelope to 4M Consulting President Michael B. Sherman at 1307 Brooke Drive, Newberg, Oregon 97132, prior to May 21, 2004. Complete all areas with data from the completion of the year 2003. Thank you for your time and effort to assist the Mount Vernon Fire Department in their strategic planning. All participating fire departments will receive a collation of the final data that is received as a result of this benchmark survey. Please provide necessary text to explain any anomalies in the data you provide.

### 1. Response statistics for the year 2003.

Ambulance transports \_\_\_\_\_ (N/A if a non-transporting agency)  
If a non-transporting agency, do you provide ALS 1<sup>st</sup> response (Engine or Rescue)? \_\_\_\_\_.

EMS calls (includes all rescues & above transports) \_\_\_\_\_

Fire calls \_\_\_\_\_

All other calls \_\_\_\_\_

**Total Calls** \_\_\_\_\_

Overall % that is EMS related \_\_\_\_\_

What is your standard staffing for engine company emergency response? \_\_\_\_\_.

Do you provide "Duty Officer" coverage? \_\_\_\_\_. If so, how is that coverage provided (management staff rotation, volunteers, career officers, a hybrid, etc.)?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### 2. The most current five-year fire loss data (in dollars) for the department.

1999 \_\_\_\_\_, 2000 \_\_\_\_\_, 2001 \_\_\_\_\_, 2002 \_\_\_\_\_, 2003 \_\_\_\_\_.

### 3. Growth trends within the district over the last five years.

Has your District/City grown in the last five years? \_\_\_\_\_

Do you have any percentages for growth over the last five years, either percentage per year or an overall estimate over the last five years (from 1998 to 2003)?

1999 \_\_\_\_\_, 2000 \_\_\_\_\_, 2001 \_\_\_\_\_, 2002 \_\_\_\_\_, 2003 \_\_\_\_\_; or % for 5 yrs. \_\_\_\_\_.

Estimate your District/City's projected growth for the next five years, either percentages per year or an overall estimate for the next five years (2004 to 2008)?

2004 \_\_\_\_\_, 2005 \_\_\_\_\_, 2006 \_\_\_\_\_, 2007 \_\_\_\_\_, 2008 \_\_\_\_\_; or % for 5 yrs. \_\_\_\_\_.

### 4. The District/City's population served? \_\_\_\_\_.

### 5. The District/City's square miles served? \_\_\_\_\_.

6. The District/City's tax rate for fire and EMS services. \_\_\_\_\_.
7. The District/City's true cash value (TCV) or Assessed Valuation (AV). \_\_\_\_\_.
8. The District/City's ISO rating. City \_\_\_\_\_, District \_\_\_\_\_. (If your protection area has more than one ISO class, then list both and explain)  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
9. The number of paid firefighting personnel (all ranks, including fire chief, no clerical) \_\_\_\_\_.
10. The total number of volunteer **firefighting** personnel (all ranks). \_\_\_\_\_;  
 Any **non-firefighting** volunteers. EMS only \_\_\_\_\_; Prevention \_\_\_\_\_; Other \_\_\_\_\_.
11. The total **First Responder**, **EMT B**, **EMT I**, and **EMT P** personnel volunteer and paid.
 

	<u>Paid</u>	<u>Volunteer</u>
<b>1<sup>st</sup> Responder</b>	_____	_____
<b>EMT B</b>	_____	_____
<b>EMT I</b>	_____	_____
<b>EMT P</b>	_____	_____
12. The total number of fire stations. \_\_\_\_\_. What is your minimum career staffing for each station? \_\_\_\_\_.  
 Please explain any special staffing arrangements: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_
13. The total department budget for 2003/04 (do not include the figures from #15?). \_\_\_\_\_.
14. **Fire Prevention activities.**  
 Total annual fire prevention inspections for 2003. \_\_\_\_\_.  
 Total fire education programs delivered for 2003 (include station tours). \_\_\_\_\_.  
 Total 2003 fire investigations (beyond routine company officer cause & origin). \_\_\_\_\_.  
 Number of personnel solely assigned to fire prevention. \_\_\_\_\_.  
 Description of other personnel involved with prevention and education. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

*4M Consulting*

*Excellence Through Preparation*

*Fire, Police, & EMS*

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Newberg, Oregon 97132

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E-mail: shermanm@open.org

January 5, 2005

Steve Abel, Fire Chief  
Mount Vernon Fire Department  
1901 N. LaVenture Road  
Mount Vernon, WA 98273

Dear Steve,

We enjoyed working with your organization and the planning team members during the development of the *Mount Vernon Fire Department (MVFD) Strategic Plan*. The team's commitment to the project created a comfortable environment to focus on positive change for the future. The planning team members served the MVFD constituents well by devoting many hours to the necessary review and creation of this plan.

We encourage the management team of MVFD to update the goal progress at each staff meeting by using the electronic modified Gantt chart provided. This goal progress tracking mechanism in conjunction with the corporate values, refined mission statement, vision statement, and the overall analysis and review of the MVFD operations, will improve the organization's ability to prepare to meet the future.

*4M Consulting* respectfully submits the *Mount Vernon Fire Department Strategic Plan* in the sincere hope that we have, both in process and product, met or exceeded MVFD's expectations. If the City of Mount Vernon has future needs in the area of planning, training, or testing, please contact me.

Sincerely,

*Michael B. Sherman*

Michael B. Sherman, President  
*4M Consulting*

To ensure the maximum benefits for MVFD from the strategic planning process and the final plan, a process was established that included the following elements:

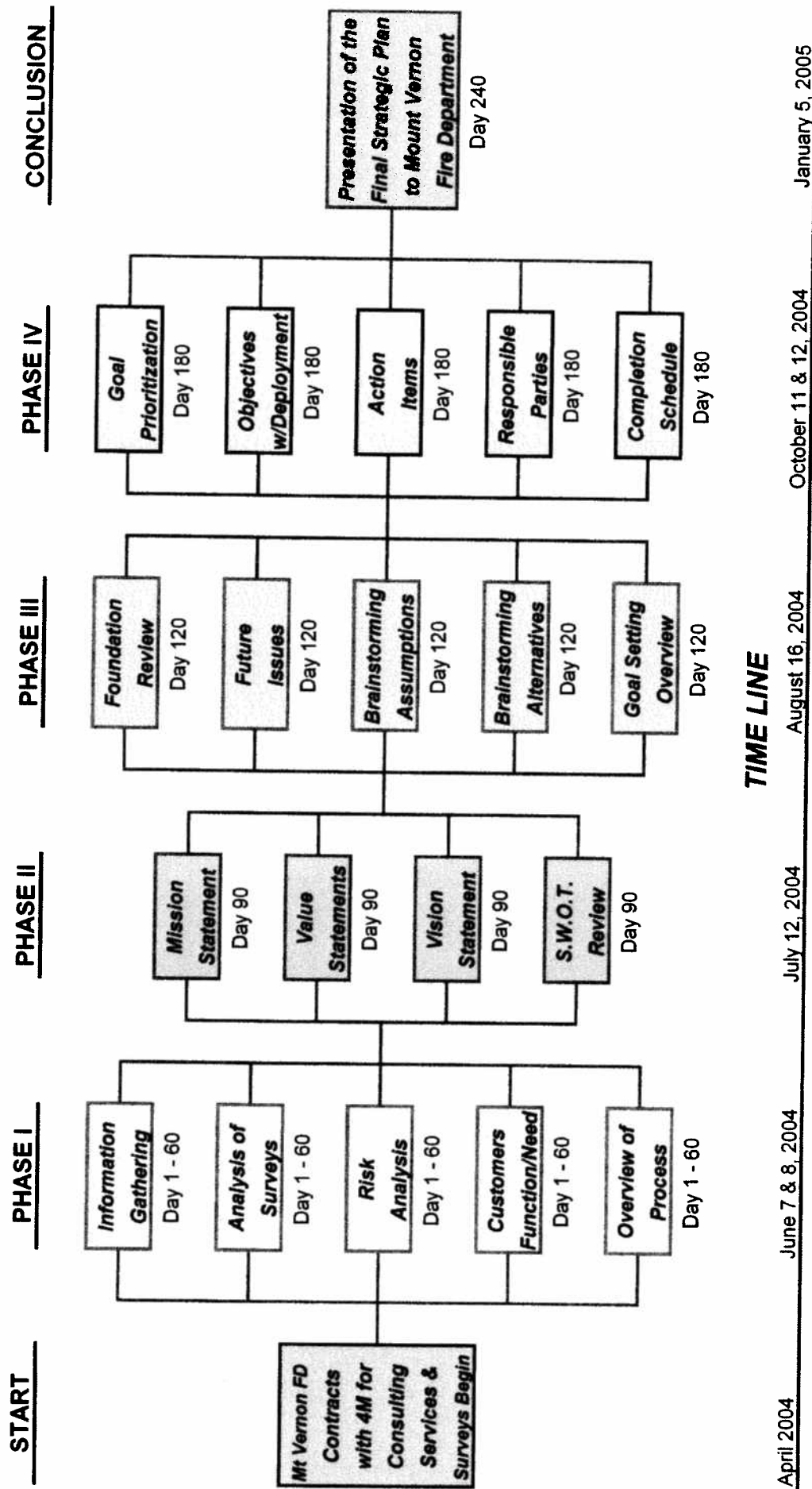
- Clear introduction (page 1)
- Definition of terms (page 2)
- Overview of the planning process (page 5)
- Fire department overview (page 8)
- Current fire department organization chart (page 11)
- Customer feedback survey and analysis (page 12)
- Benchmark survey and analysis of similar fire department operations (page 16)
- Description of the risk analysis process used (page 19)
- Risk analysis of the current MVFD status (page 31)
- MVFD customers and their needs (page 57)
- MVFD functions and services (page 59)
- Strengths, weaknesses, opportunities, and threats review (page 61)
- Mission, vision, and value statements (page 65)
- Assumptions, alternatives, and future issues (page 68)
- Future goals, objectives, and action items (page 71)
- Modified Gantt Chart for electronic tracking of goal progress (page 79)
- MVFD response area maps and fire demand zone overlays (Appendices #3 and #4)

The planning process began in earnest in April 2004 with the decision to randomly survey a group of 500 customers for their opinions in several areas concerning MVFD. It was also decided at that time to conduct a benchmark survey of comparable fire departments. Members of the MVFD management team, in consultation with the Mayor, approved the survey questions for both the customer feedback and fire department benchmark survey instruments. Within a few weeks of approval, both surveys were distributed. Completed surveys were received, collated, and analyzed for the first planning session. After the Mayor appointed citizens, council members, MVFD managers, career line staff, and a volunteer representative to the MVFD strategic planning team, the twelve members participated in the first official planning session (June 7, 2004). During this first meeting the planning team concentrated on a thorough review of the customer feedback and fire department benchmark survey analyses. MVFD customers and their needs as well as fire department functions and services were documented.

The major theme of the customer feedback was highly supportive of the fire department and the general comments were for the most part positive. The one anomaly noted was the high level of recognition by the MVFD customers of the fire department's prevention efforts. The major difference noted in the benchmark survey was that all the fire departments that operated transporting ambulance services needed significantly lower effective tax rates to provide similar fire protection services to their communities. One other significant statistic is that MVFD was

# Mount Vernon Fire Department

## Strategic Planning Process



Contract ----- Data ----- Draft Intro ----- Draft Statements ----- Draft Analysis ----- Goal Statements ----- Draft Plan ----- Final Draft

### Correspondence

In 1991, the Mount Vernon Fire Department celebrated its centennial with a public open house. Pictures of the original fire department members, old MVFD Fire Station No. 1, historic fires, and old apparatus were placed on display. Over 400 guests attended and the fire department's newest apparatus, a 1990 Pierce fire engine, was also displayed.

As the city grew, so did MVFD. In 1993, six additional career firefighters were hired to staff the aerial ladder apparatus. The fire department was also outgrowing its facilities, and in 1994, a bond issue was approved to build two new fire stations. MVFD Fire Station No. 3 was constructed on east Division Street and placed in service in 1997. MVFD Station No. 2 was relocated to its present site on North LaVenture Road in 1999. The new MVFD Fire Station No. 2 houses a small museum where the original 1920 American LaFrance is currently on public display. Fully restored over a ten-year period, the 1920 LaFrance is now used for parades and fire prevention activities. Vintage photos and the brass pole from the original MVFD Fire Station No. 1 are also displayed in the museum.

Today MVFD covers twelve square miles of urban, suburban, and some small rural areas. The coverage area includes a segment of Interstate Highway 5, an older downtown area, resident care facilities, and newer subdivisions mixed in urban wildland interface conditions. MVFD provides a full line of modern services that includes fire suppression, basic life support emergency medical response, operations level hazardous material spill response, limited technical rescue capabilities, fire inspections, public fire safety education, and building pre-fire planning. Current staffing consists of thirty-three career personnel and approximately twenty-five on-call volunteers. The fire department responded to over 3,000 calls for assistance in 2003. MVFD Fire Station No. 1 and MVFD Fire Station No. 3 engine companies are now staffed full time with a minimum of two career firefighters per shift. The aerial quint apparatus housed at MVFD Fire Station No. 2 is also staffed full time with two career firefighters per shift. MVFD apparatus now consists of five fire engines, one aerial ladder and one rescue truck, complete with air compressor, extrication tools, and equipment. MVFD is an Insurance Services Office (ISO) rated class 4 fire department.

Several MVFD career firefighters have over 20 years of experience within the fire department. Some of the current firefighters' fathers also worked and/or volunteered at MVFD. Many of the MVFD volunteers are actively seeking careers in the fire service and several volunteers are students in the college fire protection program. The MVFD volunteer ranks experience approximately a thirty percent turnover rate each year. Currently, maintaining a cadre of trained and experienced volunteers is a constant challenge for the community.



Mount Vernon is located in Skagit County, Washington and is about half way between Seattle and Vancouver, British Columbia. Approximately an hour drive along Interstate Highway 5 will reach either city. The area is renowned for the boating and fishing opportunities as well as close proximity to the San Juan Islands. The city is also just a short drive from the surrounding mountains.

Skagit County is primarily agricultural and rural. Mount Vernon is the county seat, with a population of about 27,000 within twelve square miles. Nearby cities are Burlington (adjacent and to the north, population 7,200), Anacortes (about twenty minutes west, population 15,000), and Sedro-Woolley (about ten minutes northeast, population 8,900). Approximately fifty percent of the county's population is within the four cities, the other fifty percent lies within the unincorporated areas.

Skagit County operates with three county commissioners. The county commissioners are full-time and act as the legislative and administrative body of the county. The commissioners are elected to represent all citizens of the county, both within the cities and rural areas. Mount Vernon's leadership strives to maintain a professional and smooth working relationship with the county.

Skagit County has three allied agencies that directly affect MVFD operations: a consolidated 9-1-1 dispatch center, a county EMS agency, and the Department of Emergency Management. The Skagit County EMS agency was set up to oversee the provision of EMS throughout the county. They are the coordinating and oversight agency for all EMS provision as well as the agency which allocates tax dollars from the countywide EMS levy. In 2003, they became a provider of EMS ambulance transport services within the central portion of the county. MVFD is one of only two fire departments in the county using the county 9-1-1 center to provide unit specific dispatching. All of the other twenty county fire departments are toned for the entire fire department on every emergency response. After being toned for the emergency the volunteers and off duty paid staff from each fire department respond to their respective fire halls to staff firefighting, rescue, or medical apparatus.

Skagit Valley College is also located in Mount Vernon, across the street from the MVFD administrative fire station on LaVenture Boulevard. The college has an excellent fire science program. MVFD currently provides firefighters to teach part-time at the college, which helps in maintaining excellent relationships with the college and throughout the county fire departments. MVFD recently began a work-study program utilizing the college students as support personnel.

The population growth in MVFD over the past five years was less than the benchmark comparable average (MVFD = 15%, average 17.9%), yet their projected growth figure for the next five years exceeded the benchmark comparable average (MVFD = 15%, average 12.2%). Mount Vernon appears to be benefiting from a strong in-migration of people desiring a small, positive community within reach of the major metropolitan areas and recreational opportunities. This was also supported by the large number of customer feedback surveys that reflected a large retired population.

MVFD operates their EMS response with two volunteer and six career first responders, eleven volunteer EMT-B's, and twenty-four career EMT B's. MVFD does not have any volunteer or career EMT I's or EMT P's. This situation is in direct relation to MVFD not providing Intermediate Life Support (ILS) or Advanced Life Support (ALS) medical services. The benchmark comparable averages for the fire departments analyzed were 2.0 volunteer first responders, 2.1 career first responders, 17.1 career EMT B's, 7.4 volunteer EMT B's, 0.9 career EMT-I's, no volunteer EMT-I's, eight career EMT-P's, and no volunteer EMT-P's. Among just the four fire departments operating transporting ambulance services, the average number of career EMT I's was 1.5 and the average number of career EMT P's was 14. Again, this is a direct reflection of fire departments that operate a transporting ambulance service in contrast to those that do not operate such a service.

After the fire department benchmarking analysis was completed and all graphs and charts developed, the strategic planning team was presented information in a notebook form for discussion and personal analysis. The impact on the current status of the fire department was discussed based on the comparable analysis. Discussions revolved around the potential reasons for differences in some benchmark figures and the team members' understanding of the MVFD level of service, costs, and efficiencies in relation to current resources. This new understanding supported the need for further analysis, through a thorough MVFD Deployment Process, to determine an appropriate *Standard of Cover*. MVFD staff met with the consultant and divided up the areas of research to provide additional data for the risk analysis section of the strategic plan.

Significant discussions ensued around the current service delivery model of a combination volunteer/career department and the potential for the provision of ALS capabilities. This information created a significant portion of the necessary foundation for the final goal setting process in the last session. All areas revealed in the benchmarking process that created a less than acceptable risk were revisited when the planning team prioritized the MVFD goals and objectives.

## 8. Industrial

- Anacortes Water Treatment (Moderate 37.80)
- Burlington Northern Railroad- railcar staging and transfer of product: anhydrous ammonia, chlorine, propane (Special Risk)
- Draper Valley (High Risk 45.50)
- Metal plating facility (High Risk 42.28)
- MV Cold Storage: anhydrous ammonia downtown (High Risk 43.20)
- Skagit Valley Farmers and Cenex: agricultural supplies (Moderate 38.74)
- Waste water treatment center (High Risk 40.30)

## 9. Special Events

- Christmas parade (Special Risk)
- Downtown street fair (Special Risk)
- River festival (Special Risk)
- Skagit highlands (Special Risk)
- Tulip festival (Special Risk)

It must be noted that there is a potential for annexation of "South Mount Vernon," which is almost entirely industrial properties. In addition to the above potential annexation, some new emerging trends will have a significant affect on providing fire and medical services. These trends are limited impact developments, skinny streets, and the increased numbers of high density developments. Future impacts will include the Interstate Highway 5 expansion, the viaduct replacement, Burlington Northern Railroad, and the 2010 Winter Olympics in Vancouver, British Columbia. Major emergencies at any of the above target hazard locations could tax initial responders beyond that of normal emergencies. This would necessitate additional responders and equipment from adjoining communities.

## Fire Demand Zones

Fire demand zones are developed for the purpose of delineating emergency response protocols so that the proper response is sent to any similar type hazards under similar situations. An example would be the downtown core commercial area of town that has need of extra ladder trucks and manpower, yet has good access and water supply. Other examples are similar sections of Interstate 5, rural residential areas with poor water, areas of high concentrations of life-hazard type occupancies such as care facilities, and high density residential areas. Each of these areas has extremely different needs for emergency response capabilities, yet within the zone the hazards presented are similar and similar external considerations exist.

### Equipment and Staffing Deployment

The equipment owned by MVFD represents an excellent mix of engines and aerial apparatus for structural firefighting as well as EMS response vehicles. The department has five fire engines, two aerial ladder trucks, one rescue vehicle, and several staff vehicles equipped for emergency responses and incident command operations. The firefighting equipment is distributed in such a manner to ensure rapid first unit response times. Fire engine and ladder truck responses appear adequate until compared to the actual deployment of an effective firefighting force. With all apparatus responding with a two person complement of firefighting personnel, the assembly of enough firefighting personnel to comply with two-in, two-out safety requirements for interior firefighting and other urgent tasks for command, scene safety, search and rescue, water supply, and/or ventilation takes a much longer amount of time.

On a good day, a structure fire with no other calls at the same time will receive a response of three two-person fire engines by emptying all MVFD stations on the initial tone-out. This response will produce only two firefighting personnel in a timely manner (the first due company), four additional firefighting personnel with the delay of coming from their first due area to the area of the fire, and one to three daytime officers depending on their location and if available.

During a scenario such as this the first firefighter (1) will typically take the hydrant on arrival for water supply if it is a working fire. The other firefighter (1) is the person driving and controlling the fire engine pump to guarantee water pressure for the hose lines. The first daytime officer (1) would usually take the incident command position and take control of fire ground operations and size-up of the fire. The next in fire engine (keep in mind they are from another first due area) on arrival would set up the first attack line for interior firefighting (2) and the last fire engine (from the farthest away) would setup the outside firefighting line that must be in place with two firefighting personnel (2) before the interior attack can commence. The next daytime officer if available would either be assigned a division of the fire (exposure side or rear) or as safety officer. The hydrant firefighter when completed with the hydrant task would be available for horizontal ventilation tasks or other assignments while waiting for other firefighters if vertical ventilation is needed.

Under this scenario, no firefighters are available to operate the aerial device or establish redundant water supplies to any of the other fire engines. Those tasks would have to wait until off-duty or volunteer personnel arrive, or until automatic aid or mutual aid companies from other

Motor Vehicle Accidents (MVA) w/injury: 7 personnel needed within 6-8 minutes to perform the following tasks:

Incident Command/coordination (1)

Scene security/safety (1) (usually the same person as IC)

Vehicle stabilization (2)

Fire Control Hose Line (2) (if fuel leak or other indication it may be needed)

Patient access and assessment (1) – 2 if multiple patients

The same personnel must assist medics with patient treatment (usually more than 1 patient), packaging, and loading into ambulance.

The above does not include care for family, gathering patient and medication history, or patient extraction. If extrication is needed, an additional 2-3 firefighters are needed. MVFD standard response is: 1 duty officer, 2 engines (2 FF's each) **Average personnel responding: 5.** The transporting ambulance responds with 2 personnel from various locations around the county.

***MVFD EMERGENCY MEDICAL RESPONSE MVA w/Extrication or Fuel Leak***

<i>FIRE APPARATUS RESPONDING</i>	<i>MINIMUM APPARATUS STAFFING</i>
1 Duty Officer	1
2 Fire Engines or Rescue w/engine	4
1 Ambulance ( <i>non-fire</i> )	2 ( <i>non-fire</i> )
<b>4 TOTAL (1 non-fire)</b>	<b>7 TOTAL (2 non-fire)</b>

HazMat Spill Response: 11 personnel needed within 8 minutes to perform the following:

Incident Command (1) - required by law

Safety (1) - required by law

Decon (2)

Operations (spill control or hazard mitigation) (2)

Standby (2) - required by law

Pump Operations (1) - for decon and fire control

Fire Control (2) - if flammable material involved

The above does not include personnel for scene security, recon, or liaison with spiller, technical experts, or hazmat team members. MVFD standard response is: 1 duty officer, 2 engines (2 FF's each). **Average personnel responding: 5.**

***MVFD STANDARD HAZARDOUS MATERIAL SPILL FIRST RESPONSE***

<i>FIRE APPARATUS RESPONDING</i>	<i>MINIMUM APPARATUS STAFFING</i>
1 Duty Officer	1
2 Fire Engines	4
<b>3 TOTAL</b>	<b>5 TOTAL</b>

The high priority service level objectives from the 1992 master plan are restated here:

1. Initial responding fire service units shall arrive within 5 minutes of notification of an alarm to 95% of the population of the City.
2. All first alarm assignment resources shall arrive on scene with adequate personnel to be in operation within 10 minutes of notification of the alarm in 95% of all incidents.
3. First alarm personnel and equipment shall be maintained at a level sufficient to provide 1000 gallons per minute of fire flow at 95% of all fire scenes within 10 minutes of notification of alarm.
4. A basic life support unit will arrive at 95% of the emergency medical calls within 5 minutes of receipt of a call for assistance.

In addition to the degradation of initial response times, MVFD is unable to assemble an effective firefighting force on residential and commercial structure fires that can be expected to produce nationally recognized fire flows for both residential and commercial structure fires in a timely manner. The acceptable risk for the citizens of Mount Vernon concerning structure fire response would be that MVFD could produce an initial response to residential structure fires and small commercial fires to safely extinguish those fires in a timely manner. To meet this expectation MVFD staffing levels should be increased through the use of a bona fide deployment process. The end result of the deployment process should be to adopt a *Standard of Cover* for the Mount Vernon community that includes the deployment of firefighting forces that can produce a minimum of 1000 GPM on structure fires in a timely manner. Also, that process should include the deployment of fire department personnel medically trained to a minimum of the EMT basic level with defibrillation within five minutes of 95% of all emergency medical calls.

Added to the above discussions was the review of the customer feedback. Several areas were discussed by the planning team members to provide an informational place mark in the process for the general areas addressed by their customers. Areas of potential improvement that were noted were: enhancing the ability to produce more consistent emergency response personnel to major and multiple incidents, enhancing the ability for administrative personnel to accomplish MVFD administrative duties, and staffing up to a level to eliminate the need for two-person engine companies. One other area affected by two firefighters staffing each of the two substations is the overall resource utilization ratio (RUR) for each full time equivalent (FTE) of each employee. This ratio should preferably be around eight hours per FTE and is typically slightly

## OPPORTUNITIES and THREATS

*THE FOLLOWING LIST IS ORGANIZED IN ALPHABETICAL  
FORMAT, NOT INDICATING IMPORTANCE OR PRIORITY.*

### Opportunities

- ⇒ Annexations
- ⇒ Changes in elected officials
- ⇒ Department of Natural Resources (DNR) contracts
- ⇒ Emergency management
- ⇒ Enhanced partnering
  - Existing
  - New
- ⇒ Enhanced technical rescue
- ⇒ Enterprising training programs
- ⇒ Enterprising fire prevention
- ⇒ Financial diversification
- ⇒ Improvement of ISO rating
- ⇒ New services
- ⇒ Provision of ALS/transport services
- ⇒ Public relations/education
- ⇒ Reducing costs for built-in protection (PUD)
- ⇒ State mobilization
- ⇒ Station relocation
- ⇒ Technology advancements (Equipment)
- ⇒ Volunteer program enhancements

## GOAL SETTING

To begin the goal setting section of the MVFD Strategic Plan, potential customer contacts were brainstormed by the planning team members in Phase III of the process. All potential customer groups were reviewed. Customers were selected that had some knowledge of the fire department roles and responsibilities. These customers were either interviewed by planning team members or allowed to return written lists of potential goal statements that they felt MVFD could accomplish in a two to four year planning period.

The customers identified were the allied agencies, business representatives, citizens in general, other City of Mount Vernon departments, county representatives, fire department members (both career and volunteer), the Mount Vernon elected officials, neighboring departments, private agencies, and other public agencies. Planning team members volunteered to be responsible for certain groups of customer contacts. The list of planning team members and their area of responsibility was established as follows:

1. Steve Abel: Mutual aid departments and other City departments
2. Glenn Ash: City Council members and other elected officials
3. Glenn Brautaset: Allied agencies and building officials
4. Bill DeHon: MVFD volunteer staff
5. Paul Gonzales: City Council members and police agencies
6. Alisha Hushka: Allied agencies and other City departments
7. Mark Malone: Other public agencies
8. Scott McMullen: City Council members and other elected officials
9. Harold Page: Business owners, contractors, and developers
10. Aaron Robbins: MVFD career staff
11. Mike Urban: Business owners and other private agencies
12. Mike Voss: MVFD career staff

\* All members of the planning team were encouraged to also make contact with other members of the general population in the MVFD service delivery area, if they came in contact with individuals that had some knowledge of MVFD operations.



## 6. Replace MVFD Fire Station No.1

### Objective A. Determine the Best Location for MVFD Fire Station No.1

#### Action Items

1. **Conduct a fire station location study**  
 Responsible Party: S. Abel Completion Date: Mar. 2006
2. **Present fire station location study findings to the City Council**  
 Responsible Party: S. Abel Completion Date: June 2006
3. **If a new location is determined, create a plan of action to acquire land**  
 Responsible Party: S. Abel Completion Date: Oct. 2006

### Objective B. Design the New MVFD Fire Station No.1 to Meet Needs

#### Action Items

1. **Define fire station no.1 needs**  
 Responsible Party: S. Abel Completion Date: Sept. 2006
2. **Establish fire station no.1 design committee**  
 Responsible Party: S. Abel Completion Date: Nov. 2006
3. **Conduct input meetings on the design of fire station no.1**  
 Responsible Party: Station Design Committee Completion Date: Apr. 2007
4. **Finalize fire station no.1 design**  
 Responsible Party: Station Design Committee Completion Date: May 2007

### Objective C. Secure Funding for the New Fire Station No.1

#### Action Items

1. **Determine preferred funding mechanism for fire station no.1**  
 Responsible Party: City Council Completion Date: Jan. 2007
2. **If needed, conduct election for the funding of the new fire station no.1**  
 Responsible Party: City Council Completion Date: July 2007

Annually Repeated Goals

Mount Vernon Fire Department Strategic Plan

ACTION ITEM PROGRESS REPORT

Moved

Responsible Party	#	2005												2006		
		Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
S. Abel	1	1-A-1														
M. Malone	2	1-C-1														
M. Malone	3	3-A-1														
C. Love-Johnson	4	4-A-1														
Abel & G. Brautaset	5	7-A-1														
S. Abel	6		2-A-1													
S. Abel/Union Pres.	7		3-A-2													
Labor/Mgt. Com.	8		3-A-3													
M. Malone	9			2-A-2												
M. Malone	10			2-A-3												
S. Abel	11			2-A-4												
Deployment Com.	12				1-A-2											
G. Brautaset	13				1-B-1											
Support Services Com.	14				1-C-2											
S. Abel	15				2-B-1											
S. Abel	16				2-B-2											
G. Brautaset	17					1-B-2										
Support Services Com.	18					1-C-3										
M. Malone	19					2-A-5										
Management Team	20					5-A-1										
S. Abel & G. Brautaset	21					7-A-2										
Deployment Com.	22						1-A-3									
S. Abel	23						1-B-3									
S. Abel	24						1-C-4									
C. Love-Johnson	25						4-A-2									
Management Team	26						5-A-2									
S. Abel & G. Brautaset	27						7-B-1									
MV City Council	28							1-A-4								
MV City Council	29							1-B-4								
MV City Council	30							1-C-5								
S. Abel & G. Brautaset	31							7-B-2								
S. Abel & G. Brautaset	32							7-B-3								
C. Love-Johnson	33								4-A-3							
M. Malone	34									4-B-1						
S. Abel & Mgt. Team	35									5-A-3						
M. Malone	36										2-C-1					
C. Love-Johnson	37										4-B-2					
S. Abel	38											2-C-2				
C. Wishert	39											3-B-1				
MVFD Staff	40											4-B-3				
FC Abel	41												3-C-1			
C. Wishert	42													3-B-2		
S. Abel	43													5-A-4		
S. Abel	44													5-B-1		
Vol. Incentive Com.	45														5-B-2	
S. Abel	46															6-A-1

## Executive Summary

Approximately thirteen years ago the Mount Vernon Fire Department (MVFD) began significant planning efforts to keep up with the fast pace of changes in the community. These efforts led to the publishing of the *MVFD Fire Services Master Plan - Interim Report* in August 1991. Shortly after that interim report, in January 1992, the *MVFD Fire Services Master Plan* with its *Goals and Objectives Prioritization Report* was published. Over the past thirteen years, efforts toward improving fire services in the City of Mount Vernon have used the master planning documents as guides. The construction of the third fire station and the relocation of fire station no.2 were all accomplished under the guidance of the 1992 master plan. Service level objectives for target response times and desired staffing levels were also established.

The listed benefits of master planning in the 1992 plan included: **1. Provide an accurate review of the current levels of service provided; 2. Establish coordinated guidelines, goals, objectives, and priorities for future service; 3. Establish guidance for program implementation and review; 4. Increase the effectiveness and efficiency of fire services; and 5. Provide direction for future requests for resources.** Many of these benefits were realized from those planning efforts, but a rejuvenation of strategic planning efforts for MVFD was needed to lead the fire department to the level of service desired by their customers. Two service level objectives noted in the 1992 master plan, target response times and staffing levels, remained unmet and in many instances were getting worse due to community growth and emergency call volume which had more than doubled in the last thirteen years.

In the spring of 2004, the City of Mount Vernon leaders engaged in a strategic planning process to set the future direction for the entire city. That plan, adopted by the City Council on July 7, 2004, included an objective under Goal #V – Quality of Life (Public Safety) to “Complete the Fire Department Five-Year Master Plan” by December 2004. Mayor Bud Norris and Fire Chief Steve Abel set out to accomplish a process that would provide at least the benefits that were listed in the 1992 plan and hopefully dovetail with the overall *City of Mount Vernon Strategic Business Plan*. Also, with new national standards for fire department deployment of resources focusing on safe and effective fire department operations, it was desired to complete much of a *Standard of Cover* document for MVFD during this strategic planning process. After reviewing proposals and selecting *4M Consulting* of Newberg, Oregon as the strategic planning consulting firm, a planning process was reviewed, adjusted, and confirmed that would accomplish the intent of the City of Mount Vernon leadership.

only one of two of the comparable departments that operated three fire stations, but MVFD was the only fire department to staff all of its fire engine responses with only two firefighting personnel. One other city noted that they staff fire engine responses at one of their two stations with only two firefighting personnel and another city let one of their stations reduce to two personnel for fire engine responses on rare occasions. All of the other fire stations included in the survey provided fire engine responses with a minimum of three firefighting personnel. This statistic supported much of the risk analysis information on resource deployment. It should be noted here that the 1992 master plan set a service level objective to add a third person to two of the three MVFD engine companies and add two person staffing to the aerial ladder truck raising the 24 hour staffing to a total of ten by the year 2001. The current 24 hour level of staffing for MVFD is six personnel.

The day after the first planning session (June 8, 2004), the consultant met with the MVFD staff to gather the necessary data to complete a thorough risk analysis. This process continued through the next three planning sessions. The risk analysis section uncovered much of the information needed for MVFD to finalize their *Standard of Cover* for adoption by the City Council. In that section the MVFD target hazard occupancies were classified for the risk they present to the community fire protection services: MVFD fire demand zones were delineated, staffing levels were reviewed, the deployment of staff and equipment was presented, historical fire department response times were reviewed, effective firefighting response force issues and firefighting capabilities were discussed, and acceptable risk was formulated.

The inability of MVFD to assemble an effective firefighting force without moving all three engine companies to structural fire incidents is the major issue in the risk analysis. This left most areas of the city uncovered for additional calls (depending on volunteers or off-duty personnel covering stations). A thorough analysis of this issue revealed that both the desired response times at the 95% level and the response times delineated in the 1992 master plan as service level objectives for the 95% level of responses are not being met. The 1992 master plan set service level objectives of five minute target response times at 95% for both fire and EMS emergencies and a ten minute arrival of an effective firefighting force for structural fires for 95% of the incidents. In the year 2003 MVFD was only able to achieve actual response times of six minutes and 53 seconds for 90% of the total incidents. The arrival of an effective firefighting force to safely perform initial fire attack operations currently for MVFD greatly exceeds the ten minute time frame on a majority of structural fire calls.

During the second planning session (July 12, 2004), the planning team reviewed and edited the MVFD mission statement, *to Protect the Lives, Property, and Environment of Mount Vernon and to Minimize Losses When Emergencies Occur*. The first drafts of potential vision statements were also documented. The second session included the establishing of the MVFD corporate values and concluded with a standard delineation of MVFD internal strengths and weaknesses as well as the external opportunities and threats (SWOT analysis).

Planning session three (August 16, 2004) focused on finalizing staffing issues, the MVFD organization chart, and needed appendices. The additional sections developed at the third session were current assumptions, potential alternatives to service delivery, and the future issues facing the fire department. The first full draft of the risk analysis was also reviewed for accuracy. This session concluded with the description of the goal setting process that would be used in the last two planning sessions.

Between the third and fourth planning sessions, the planning team members solicited various customer groups for potential goals for MVFD for the next two to four year period. Over 300 potential goal statements were received and prioritized into the top seven MVFD goals for this planning period. Five of the top seven goals were directly received from MVFD constituent groups. Two additional goals were drawn from the City's Business Plan. During the last two planning sessions (October 11 and 12, 2004), these potential goal statements were prioritized, revised, and supported by appropriate objectives and action items. The overall *City of Mount Vernon Strategic Business Plan* included six fire department objectives under the different City goals. All of those objectives will continue to be pursued diligently by MVFD. The MVFD planning team worked to interlace the final fire department strategic plan goals with the City's objectives.

The MVFD major strategic planning goals are as follows:

1. Develop and Implement MVFD Staffing to Meet the Needs of Mount Vernon (page 72)
2. Develop and Implement an Emergency Medical Delivery System to Meet the Needs of Mount Vernon (page 73)
3. Enhance MVFD Communication with Staff, Public, and Elected Officials (page 74)
4. Improve and Broaden MVFD's Financial Support (page 75)
5. Enhance the MVFD Volunteer Program (page 76)
6. Replace MVFD Fire Station #1 (page 77)
7. Explore Opportunities for Consolidations, Mergers, and/or Fire Authorities (page 78)

The planning team that finalized the different sections of this document and provided the team interaction that accomplished the desired processes of this project was a diverse group representing the major constituents of MVFD. Two members of the team were citizens that owned businesses in the City of Mount Vernon. One of those two is an architect that is heavily involved with the community's cultural issues and is a direct customer of not only fire/EMS services but also interacts as a user of the MVFD fire prevention services. The other business person is a successful business owner and has been a local volunteer firefighter as well. An additional citizen/volunteer represented the interests of the MVFD volunteers from the unique perspective of being both a long term resident of Mount Vernon and a current long term member of the department's volunteer firefighting force.

Three of the planning team appointees were Mount Vernon City Council members. One of the council members is a current public safety employee for the State of Washington. Another of the council members is a past military firefighter and a current firefighter driver/operator EMT with Boeing. The final council member on the team is a local realtor. An additional appointee to the team is the City of Mount Vernon Finance Director. Having the finance director on the planning team brought additional depth to the review of several of the planning issues. First, all financial discussions were kept accurate and the citywide financial effects of each discussion were clearly delineated. Second, as a city department director in the same organization the finance director's viewpoints came from a totally different position than any of the other constituency groups. These viewpoints definitely helped to broaden discussions and clarify financial issues.

The final five members of the team were MVFD career staff, three managers and two line staff representatives. The managers represented administration (fire chief), fire prevention (fire marshal), and operations and training (assistant chief/training and operations). The line career staff members were represented by one fire officer (captain) and one firefighter/EMT B.

The overall make-up of the planning team is crucial to understanding the process and product of this plan. First, the process was not driven by any single group. All discussions were done in an honest and open format, always seeking consensus. Second, final components of the plan were established through this broad-based consensus process. Third, all team members had absolute open access to presenting goal input from a wide variety of customers within their circles of influence. Finally, the prioritization of goals was done using a non-biased, three methodologies, and computer based rating system that cannot be manipulated by any single individual or a select few from a single focus. The final priority goals represent the "true" priorities of this broad-based team. For further understanding of the team diversity, eleven of the twelve planning team members have biographies and photos presented on the next three pages.



**Paul G. Gonzales, City Councilor:** Paul has lived in Mount Vernon for over seventeen years. He is married to Lynda, who is a first grade school teacher from Burlington, Washington. They have two wonderful twin sons that are sophomores at Mount Vernon High School. Paul attended Eastern Washington University and graduated from the Washington State Patrol Academy in 1987. Paul has over eighteen years in public safety and is currently a Mount Vernon City Council member from Ward #1. He is a past member of the Mount Vernon Planning Commission. He enjoys golf, tennis, and watching sports with his family.



**Alicia D. Hushka, Finance Director:** Alicia moved to Mount Vernon in 1993 with her husband Glenn. They have two wonderful children, Jeff and Rachel. Alicia has worked in the Skagit Valley since 1993, eight years with Skagit County government, then joining the City of Mount Vernon in 2001 where she is the Finance Director for the City. Alicia graduated from Montana State University in 1987 with a BA in business and accounting, and soon after became a certified public accountant, practicing as a CPA for a local firm in Denver, Colorado for five years. Her family considers the Skagit Valley home and enjoys spending time with family and friends, biking, hiking, jogging, and gardening.



**Mark Malone, Assistant Chief:** Mark has an Associate of Technical Arts in Forestry. He returned to college, becoming a student resident at the Centralia Fire Department. Mark graduated from the State Fire Academy and became an EMT. He then began testing for a position as a firefighter. He worked for Sheppard Ambulance in Seattle and was hired by the Mount Vernon Fire Department on April 29, 1985. Continuing his learning with conferences, the National Fire Academy, college level coursework, and on-the-job training, Mark was promoted to Captain on October 7, 1999 and to Assistant Chief of Training and Operations on August 5, 2003. His wife, Sue, is a teacher at Clear Lake Elementary. He has daughters Sandi, a college student, and Sara, a high school freshman. Mark likes to hike, backpack, and climb.



**Scott McMullin, City Councilor:** Scott grew up in the Mount Vernon-Skagit Valley area. After serving in the United States Air Force (USAF) and Civil Service as a firefighter and fire captain, he returned to Mount Vernon in 2000. He is employed by the Boeing Fire Department as a Driver/Operator EMT. Scott continues to serve in the Air Force Reserves at Elmendorf Air Force Base in Alaska as an Assistant Fire Chief. He has over twenty-five years of experience in the fire service. Scott is a member of the Mount Vernon Kiwanis Club. He is currently serving his first term on the Mount Vernon City Council. Scott enjoys camping, boating, and crabbing with his wife, Nelma, and their five children.

## INTRODUCTION

In 1992, the Mount Vernon Fire Department (MVFD) conducted a thorough strategic planning process to guide the fire department through the end of the last millennium. After twelve years and several significant changes in the community and fire department staff, it was determined to commence another full strategic planning process. In addition, the Mount Vernon City Council and management staff met in May 2004 and completed an update of the *City of Mount Vernon Strategic Business Plan* (six-year business plan). This plan was adopted by the Mount Vernon City Council on July 7, 2004. It was determined that conducting an update of the fire department's strategic plan at this time would allow the fire department to dovetail its strategic direction with that of the overall city. Every effort in the fire department's planning process was reviewed from the standpoint of interlacing with and supporting the goals and objectives established by the *City of Mount Vernon Strategic Business Plan*.

One of the major focal points of the fire department strategic planning process was to conduct a thorough analysis of fire department operations in an effort to comply with national standards for fire departments for the adoption of a *Standard of Cover*. This concept and other specifics of the plan are thoroughly presented in this document.

In the spring of 2004, MVFD solicited proposals from strategic planning consultants to facilitate the MVFD strategic planning process. After the final review of the proposals, *4M Consulting* of Newberg, Oregon was selected to conduct the planning process. In June of 2004, Michael B. Sherman of *4M Consulting* began work on the *Mount Vernon Fire Department Strategic Plan*. Fire Chief Steve Abel, in consultation with the City of Mount Vernon Mayor Bud Norris, selected a strategic planning team that represented the major groups within the community and the fire department. This team worked closely with the fire chief and consultant to develop input for this strategic planning process. The process selected includes an executive summary; an introduction; a definition-of-terms; an overview of the process and the fire department; a resident feedback survey and analysis; a comparable fire department benchmark survey and analysis; a risk analysis; the development of a customers list and a list of their needs; the documenting of MVFD functions and services; the review of the MVFD mission, vision, and values; a strengths, weaknesses, opportunities, and threats review; establishing assumptions, alternatives, and future issues; conducting goal solicitation and prioritization; establishing objectives and action items; and finally conducting a public presentation of the *MVFD Strategic Plan*.



**EMT-Intermediate** – In addition to EMT-B training, 76 hours of didactic and 44 hours of clinical study all focusing on establishing IV lines, IO infusion, IV locks, and blood draws for specimens with special attention on administration of several drugs.

**EMT-Paramedic** – In addition to EMT-B or I training, EMT-P includes 1,000 – 1,200 hours of didactic, skills laboratory, clinical rotations, and field internship. Also, includes but is not limited to training in endotracheal intubation, needle cricothyrotomy, interpreting presenting rhythms, performing emergency cardioversion, performing transcutaneous pacing of bradycardia as well as initiating and maintaining femoral and jugular IV lines, and working under a physician advisor.

**Emergency Operations Center (EOC)** – The location established to conduct command-and-control operations for major disasters such as floods, earthquakes, or major fires.

**Fire Demand Zones** – Delineated areas used to establish emergency response protocols so that similar types of responses are dispatched to similar hazards.

**Fire Engine** – A firefighting apparatus that has a rated fire pump of at least 500 gallons per minute capacity and carries fire hose, ground ladders, and at least 300 gallons of water.

**Fire Prevention** – The actions taken that reduce the potential for the occurrence of fire incidents and/or lessen the damage and/or injuries caused by fires.

**First Responder** – The entry level emergency medical responder certification, requiring training in approximately 80 hours of basic emergency medical care.

**Flashover** – The critical stage of fire growth as it creates a quantum jump in the rate of combustion. The chances of residents surviving after flashover occurs rapidly diminishes. Also, a tremendously increased firefighting effort is needed after flashover to extinguish a fire.

**Full-time Equivalent (FTE)** – Equal to one full-time employee, either one full time person, two personnel at one-half time each, or any other combination of part-time personnel adding up to the equivalent of one full-time employee.

**Goals** – Statements of organizational direction that describe general ends toward which the organization is working to accomplish.

**High Density Development** – Development with higher numbers of dwelling units per acre than typical residential, single-family dwellings, usually, common-wall construction or apartments/condominiums.

**Insurance Services Office (ISO)** – ISO is a non-profit organization that is financially supported by the insurance industry. One function of ISO is the grading of the effectiveness of community fire protection. ISO protection classification levels are then used to determine risk to the insurance industry for the purpose of underwriting insurance policies.

**Limited Impact Development** – Development with higher numbers of dwelling units per acre similar to that of high density development, but with a lesser amount of built-up infrastructure such as sidewalks, parking spaces, street widths, setbacks, side yards, etc.

**Level of Service** – The actual services rendered including their effectiveness, frequency, and timelines as well as the overall availability to respond to major emergencies.

**Modified Gantt Chart** – The color-coded bar chart that is used to track accomplishment in regard to goals, objectives, and action items of the strategic plan.

**National Fire Protection Association (NFPA)** – A national consensus code-making organization that establishes certification criteria and training standards for public safety personnel as well as standards for fire department operations and codes.

**Objectives** – The specific results to be achieved through the accomplishment of the associated action items. As objectives are achieved, the organization moves closer to goal accomplishment. Objectives are specific, achievable, and measurable events or accomplishments.

**Peak Demand Unit** – A unit staffed only during the times of peak emergency call volume, usually daytime hours.

**Public Fire Education** – Educational services provided for the purpose of raising the public awareness of fire and life safety issues facing the community.

**Quint** – A firefighting apparatus that has all the attributes of a fire engine with the addition of a larger complement of ground ladders and an aerial ladder, usually, 75 feet or longer.

**Risk Analysis** – The analysis of the risk associated with fire loss, emergency response times, delivery system efficiency, and system management that are currently in place within the fire department for the purpose of determining acceptable levels of risk and how those levels of risk may be obtained.

**Standards of Cover** – The defined level of emergency services provided to protect the specific areas of responsibility of a fire department and the emergency personnel, staffing patterns, equipment types, and the actual deployment patterns that provide that level of service.

**SWOT Review** – The review of internal strengths and weaknesses as well as the external opportunities and threats to the provision of services by an organization.

**Target Hazard** – An occupancy that would greatly stretch a fire department's capabilities if it were to become involved in an emergency incident (i.e. hospitals, schools, care homes, apartments, or factories).

**Target Response Times** – The response times determined to be optimal in balancing the level of service with acceptable risk.

**Washington Surveying and Rating Bureau (WSRB)** – Washington State utilizes the old "deficit" ISO ratings schedule but the classification levels are the same.

Deployment Process was used as the basis for the research to be conducted. The research workload was divided among the management staff and the two line staff assigned to the planning process. As information was obtained it was routed to the consultant for analysis and processing. At the conclusion of phase one of the planning process, the dates, times, and locations for the next two planning sessions were selected.

The second phase of the planning process was an all day (July 12, 2004) session in which the strategic planning team reviewed draft documents from the first phase of the process; reviewed the fire department's mission statement; discussed potential vision statements; created corporate values for the fire department; and completed a standard strengths, weaknesses, opportunities, and threats (SWOT) review.

Between the second and final phase of the planning process, staff collated much of the necessary risk analysis data. The consultant worked on finalizing a deployment process template and analyzed the risk analysis data. Also, draft documents were refined, including an updated organization chart, for review by the planning team.

The third phase began with the review of all text documents developed to this point in the planning process. After master corrections to all documents were captured, the team then focused on three areas of brainstorming. First, the team brainstormed the assumptions of what significant attributes of the fire department would stay the same in the future. This was completed in an effort to set the foundation for how the team believed the department would perform in the future in areas that they all agreed would not change.

This was followed by brainstorming alternate ways of accomplishing the mission of the fire department. This was done in an effort to inform the department customers that the planning team did indeed review alternative ways of doing business and was aware of the different methods to accomplish the provision of needed fire department services. This discussion concluded with a short discussion of the viability of each alternative. If some of the alternatives sparked the interest of the planning team members, they would be able to resurrect those opinions in the goal setting phase of the process. If researching an alternative method of doing business became a corporate priority, goals could be set to conduct a detailed analysis of the viability of those alternatives.

The final brainstorming exercise was used to develop the issues the planning team believed would face the fire department in the foreseeable future. This exercise set the team members up with all the information they needed to fully understand the fire department's future needs prior to the goal setting phase of the process. The third phase concluded with an overview of the goal

## DEPARTMENT OVERVIEW

MVFD has been providing emergency services to the Mount Vernon community for over 100 years. MVFD was formed in 1891 as a volunteer firefighting force. The fire department eventually purchased an American LaFrance steam powered fire engine and two hand-drawn hose carts with 800 feet of fire hose. At that time, the 800 feet of fire hose was enough to reach from one end of town to the other.

In the fall of 1920, a new city hall and fire station were constructed. Located on the site of the present city hall complex, the front door was approximately where the Broadway Street entrance to city hall is today.

In December of 1920, a new American LaFrance motorized fire engine arrived by rail. This new fire engine came complete with the latest fire fighting equipment for that time. Engine Company No.1 was placed in service on January 5, 1921. With two full time drivers, Engine No. 1 was the start of the career fire department in Mount Vernon. The total department budget for 1921 was \$1,800. Career personnel began twenty-four hour staffing, seven days-a-week, in the 1960's.

By 1964, MVFD outgrew the city hall/fire station building and construction of the present city hall/fire station building began. MVFD Fire Station No. 1 was constructed first, and then the city hall complex was added later. The old station was about 2,000 square feet with two apparatus bays and sleeping quarters upstairs. The new fire station is 9,500 square feet with five apparatus bays, a maintenance bay, modern kitchen, and sleeping rooms.

In 1964, the fire department consisted of nine career firefighters and approximately fifteen volunteer members. Apparatus at that time included four fire engines (one was the 1920 LaFrance), one aerial ladder truck, and a rescue truck. The fire department responded to approximately 150 incidents that year.

With the city growing to the north and east, a second fire station was needed. The citizens passed a bond initiative that paved the way for a new three bay station and a new fire engine. In 1973, MVFD Fire Station No. 2 opened on east College Way and six new career firefighters were hired. Emergency responses for 1973 increased to 300. The fire department staff at that time consisted of approximately sixteen career firefighters and twenty paid on-call volunteer firefighters.

## CUSTOMER FEEDBACK

In April of 2004, *4M Consulting* President, Michael B. Sherman, worked with MVFD staff to develop a survey instrument to conduct a customer feedback survey. The survey instrument was finalized at the end of April 2004. The MVFD staff randomly selected 500 customers from the Skagit County voter's registration lists. On April 29, 2004 the survey instruments were mailed to the randomly selected customers.

Included with the surveys were pre-addressed, postage-paid envelopes for the customers to return the surveys after they were completed. Returned surveys were accepted until May 21, 2004. By that date 159 (31.8%) surveys were received by MVFD and routed to the consultant. The data from the mail-in surveys was analyzed by the consultant to delineate the MVFD customers' opinions about the services delivered by MVFD.

After the data was analyzed, a complete collation of all comments was developed to use as a reference document for the planning team members. The data from received surveys was discussed at the beginning of the first strategic planning session on June 7, 2004. This information equipped the planning team members with a greater understanding of issues that may need to be addressed during the planning period covered by this process.

The questions from the mailed surveys covered the following areas:

- Years of residency in Mount Vernon
- Occupational status
- Business ownership
- Current or past relationships with the fire department
- Awareness of fire department services
- Awareness of problem areas
- Use of fire department services in the last five years
- Rating of the fire department on a scale of 1 – 10
- Specific complaints or praises of the fire department
- Desired fire department services that are not currently provided
- Ranking of response times, equipment, training, and staffing relating to fire and rescue services
- Ranking of response times, equipment, training, and paramedic staffing relating to emergency medical services
- Ranking the importance of MVFD providing ambulance transport services
- Additional comments made by the customers were captured

The average residency of those interviewed was over 20.5 years. This average represented 157 total responses. Two individuals did not comment on how long they had lived in Mount Vernon. The survey question about the customers' occupations revealed that the survey reached quite a diverse representation of MVFD customers. Occupations of those surveyed ranged from retired (42.8%) to self-employed (less than 2%). The second largest category was that of business owners (13.2%). Following the category of business owner, the highest categories of response were as follows: homemakers (4.4%); teachers (3.8%); engineers (3.1%); and managers (1.9%). Several respondents listed more than one occupation. Seventy separate occupations were listed.

Over 5% of the customers surveyed had past relationships with MVFD. These relationships were diverse and included the following: a former employee, a contractor that worked on a fire station, a recipient of a blood pressure check, a dry cleaning vendor, and two individuals that received Community Emergency Response Team (CERT) training.

When asked about their awareness of services provided by MVFD, five of the services received at least a 68.6% response. Those services were as follows: EMS response (89.9%), fire prevention programs (79.2%), fire inspections (76.1%), fire suppression (69.2%), and community fire and safety education (68.6%). The four services having the least amount of citizen awareness were as follows: hazardous materials response (56.6%), technical rescue response (41.5%), business pre-fire plans (37.1%), and CERT training (35.8%). The citizens interviewed were very aware of the local MVFD fire prevention efforts. Three of the top categories for community awareness were for services delivered by the fire prevention division.

A strong majority of respondents (97.5%) were not aware of any problems in the services provided by the fire department. The overall feelings toward the MVFD services and how they are provided were very positive. Just less than 3% noted minor problems regarding MVFD services in the surveys. Comments about problem areas were the need for more staff at the fire department, funding, and two that questioned sending fire trucks on medical calls.

Over 50% of the customers surveyed replied that they had used the MVFD services. Overwhelmingly, the service used the most often, by those who commented, was the emergency medical service (EMS). The EMS relationship accounted for 28.3% of all respondents. The most interesting result in this category was the high level of interaction with the fire prevention division of MVFD. Fire inspections and public education services were listed as the second and third most frequently used services, respectively. Many of those who responded had used multiple services of the fire department.

When the customers were asked to comment on their overall rating of MVFD services on a scale of 1 to 10 with 10 being the highest rating, 137 (86.2%) of those surveyed chose to rate the fire department. The average rating by those 137 customers was 8.9. Fire departments usually are rated fairly high in customer surveys like this one, but a rating of 8.9 on a scale of 1 to 10 is extremely high for any city department.

When asked if they had heard any complaints or specific praises concerning the fire department in the last five years, 15.7% answered yes. Overwhelmingly, the majority of comments were related to hearing praises for MVFD (13.2%). The overwhelming majority of the praises were related to quick response times, professionalism, and courteous service. Interestingly, a few of the comments were to praise MVFD for quick responses, while a few of the complaints reviewed were related to response times or lack of staffing to conduct faster responses. Only three comments (1.9%) of those surveyed were negative. Two of those negative comments were about slow action by personnel once they arrived on emergency scenes, one medical call and one fire call. The other negative comment was in regard to phone calls concerning fire inspections that did not get returned. The fact that only three negative comments were listed out of 159 respondents can be construed as a very healthy sign for MVFD and its operations.

Less than 6% of the customers surveyed listed a desire for additional services to be provided by MVFD. Most of the comments were actually general comments about existing operations. They covered the areas of burn enforcement, earthquake preparedness, prevention and education programs, and smoke alarm checks. New services desired were access to emergency defibrillators and advanced life support. The customers clearly had very few new services they wished to see implemented. Most of their input was to enhance existing services, mostly in the areas of prevention and education.

When asked to rank fire and rescue issues in order of importance from #1 to #4, the customers' order of importance was calculated as follows:

- 1.28 – Rapid response times (five minutes or less)
- 2.25 – “State of the art” equipment (fire and rescue equipment and tools)
- 2.67 – Full crew on a fire engine (three firefighters), as opposed to waiting a few extra minutes for an additional fire engine or volunteer firefighters to arrive
- 2.83 – Progressive training for firefighters relating to fire and rescue capabilities

## BENCHMARK ANALYSIS

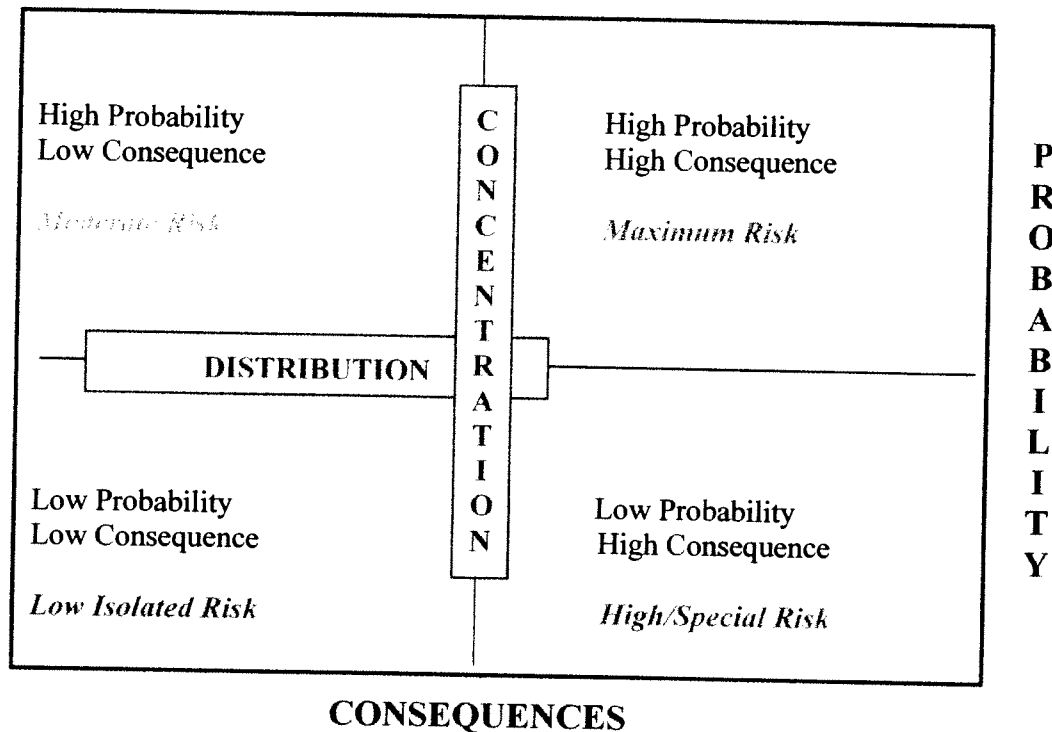
A benchmark analysis was completed comparing MVFD with seven similar Washington fire departments. Statistical information was gathered from six of the benchmark departments prior to the deadline, with one fire department submitting information after the deadline. The statistical analysis of benchmarking data was completed using information from the following fire departments: Anacortes Fire Department, Arlington Fire Department, Camas Fire Department, Longview Fire Department, Monroe Fire Department, Mount Vernon Fire Department, and Wenatchee Fire and Rescue. Originally, eleven fire departments, plus MVFD, were sent the benchmark survey instrument, with only the above seven plus the one fire department that submitted late, returning the surveys. The data was collected through a direct mail survey with follow-up phone calls to each fire department.

The average “city” population served by the comparable city fire departments was 22,412. All the comparable fire departments provided fire protection/EMS/ambulance service to an average district of 60 square miles, but they provided those same services to an average “city” area of 11 square miles. The MVFD population is approximately 27,060 and provides service to 12 square miles. The 2003 assessed value of MVFD was \$1,549,926,000, placing it slightly below the comparable average response area value of \$1,615,517,000.

The average overall 2003 annual budget of the benchmark comparable fire departments was \$3,484,554, as compared to the MVFD budget of \$3,355,001. The four fire departments operating transporting ambulance services reported an average ambulance budget of \$1,380,361. That financial resource served to reduce the effective tax usage of those departments substantially below the three departments that did not operate a transporting ambulance service. The MVFD effective tax usage rate was calculated at \$2.16/\$1000 of assessed valuation. The three fire departments that did not operate a transporting ambulance service averaged an effective tax usage rate of \$2.18/\$1000. The other four fire departments that operated transporting ambulance services averaged an effective tax usage rate of \$1.33/\$1000 of assessed valuation. The cost effectiveness of fire departments operating transporting ambulance services and the differences that are shown later in this section of the levels of EMT personnel available within the fire departments is directly affected by the provision of transporting ambulance services.

The MVFD ISO rating (ISO#4) was slightly better than the comparable municipal (City area) average of ISO #4.1, while its ISO #6 for the rural area protected by MVFD was also slightly





The above diagram illustrates four possible relationships between structures or hazardous conditions and the concentration and distribution of resources:

- Low Probability, Low Consequences
- Low Probability, High Consequences
- High Probability, Low Consequences
- High Probability, High Consequences

**Distribution:** The number of resources placed throughout neighborhoods and/or response zones. Distribution of stations and equipment is usually predicated on the highest probability fires, residential structure fires.

**Concentration:** The number of resources needed in a given area/community. Increased risk equals increased concentration. Concentration is usually predicated on the potential for the highest risk, commercial and high life hazard occupancies.

### Consequences

The risk assessment for the service area would include defining differences between various occupancies and placing each in a separate category of risk. For instance, a detached single-family dwelling, a multiple-family dwelling, an industrial building, and a high-rise would all be categorized separately. Similarly, a single-patient medical incident would be categorized differently than a multi-casualty medical situation.

These risks may require the fire department to have multiple alarm capability and to have adequately assessed its ability to concentrate resources. MVFD has none of these **maximum** risk categories.

### *High Hazard Risks (Category 2)*

A **high hazard** occupancy contains built-up areas of substantial size, with a concentration of property that presents a substantial risk of life loss, severe financial impact on the community, or unusual damage to property in the event of fire. Examples of such areas include:

- a. Older multi-story property, which greatly increases the likelihood of loss of life; apartment buildings over two stories in height with areas beyond the reach of pre-connected hose lines; buildings with low occupant load, but which store high fire-load materials or high-hazard materials
- b. Hospital and medical facilities
- c. Infrastructure facilities such as schools; city, state or federal facilities; and fire stations
- d. Industrial buildings that contain some high-risk operations
- e. High-rise buildings, even those with built-in fire protection suppression systems; commercial buildings over 10,000 square feet with occupants who may require assistance; buildings with built-in fire suppression systems but whose occupants are non-ambulatory or restrained
- f. Adult foster care facilities

These risks also may require the fire department to have multiple alarm capability and to have adequately assessed its ability to concentrate resources. MVFD has several of these **high hazard** risk categories.

### *Special Risks (Category 3)*

**Special risk** occupancies are certain occupancies, whether single buildings or complexes, that need a first-due response over and above that which is appropriate to the risk that predominates in the area. These premises or small areas should be treated as special risks and given an appropriate predetermined response.

There are many different types of special risks but some typical examples include:

- a. Residential premises of substantial size and presenting abnormal risks, such as hospitals or group homes, where individuals are under 24-hour care or have restricted mobility
- b. Isolated high-rise structures, whether residential or commercial occupancy
- c. Major chemical, hazardous materials facilities, or other high-risk industrial plants
- d. Airports, railroad lines, and major roadways

## The Stages of Fire Growth

Virtually all structure fires progress through a series of identifiable stages:

*Stage 1 - **The Ignition Stage*** - The ignition of a fuel source takes place. Ignition may be caused by any number of factors from natural occurrences such as lightning to premeditated arson.

*Stage 2 - **The Flame Stage*** - The fuel initially ignited is consumed. If the fire is not terminated in this stage the fire will progress to the smoldering stage or go directly to flashover.

*Stage 3 - **The Smoldering Stage*** - The fuel continues to heat until enough heat is generated for actual flames to become visible. It is during this stage that large volumes of smoke are produced and most fire deaths occur. Temperatures rise throughout this stage to over 1,000°F in confined spaces creating the hazard of a "back-draft" or smoke explosion. This stage can vary in time from a few minutes to several hours.

*Stage 4 - **Free Burning or "Flashover" Stage*** - The fire becomes free burning and continues to burn until the fire has consumed all contents of the room of fire origin, including furnishings, wall and floor coverings, and other combustible contents. Research into the flashover phenomenon has yielded criteria that precisely measures when flashover occurs. However, any exact scientific measurement in the field is extremely difficult. Observable events that would indicate a flashover are "total room involvement" and "free burning." These indicators are easily observable by firefighting personnel and the public.

Both scientific tests and field observations have shown that when flashover is experienced, it has a direct impact on fire protection and the capability of the emergency services system.

1. Flashover occurs at a temperature between 1,000° and 1,200°F. These temperatures are well above the ignition points of all common combustibles in residences, businesses, and industries. When this temperature range is reached, all combustibles are immediately ignited. Human survival after this point is highly improbable without specialized protective equipment.
2. At the point of flashover, lethal fire gases such as carbon monoxide, hydrogen sulfide, and cyanide increase explosively. People exposed to these gases, even when not directly exposed to the fire, have drastically reduced chances of survival.
3. Flashover can occur within a relatively short period of time after the flame or smoldering stages. Precisely controlled scientific tests indicate that flashover can occur in as little as two minutes from the flame stage. On the other hand, field observations of actual fires indicate that total room involvement can take as long as 20 minutes or more. There is no way to ascertain the time to flashover since it is not possible to determine when a fire started. We can nevertheless draw a correlation between flashover and the entire fire protection system.

## The Response Time Continuum

The Commission on Fire Accreditation International (CFAI), an agency that accredits fire departments, has defined response time elements as *a cascade of events*. This cascade is similar to that used by the medical community to describe the events leading up to the initiation, mitigation, and ultimate outcome of a cardiac arrest. Throughout this discussion, it is imperative that the reader keep in mind that some of the time intervals described can be directly influenced by the fire service (reflex interval and travel interval). Other time intervals can be influenced indirectly by the fire service such as the discovery and notification interval (through public education and engineering initiatives) and the call processing interval (through its ability to define standards and compel performance by its dispatch centers).

### Time Points and Time Intervals - The Cascade of Events

The response performance continuum is composed of the following time intervals:

- a. **Event Initiation Point** - The point at which factors occur that may result in an activation of the emergency response system. Precipitation factors can occur seconds, minutes, hours, or even days before a point of awareness is reached. An example is the patient who ignores chest discomfort for days until it reaches a critical point at which he/she makes the decision to seek assistance (point of awareness). It is rarely possible to quantify the point at which event initiation occurs. An interval that shall be termed the *discovery interval* lies between the event initiation point and the emergency event awareness point.
- b. **Emergency Event Awareness** - The point at which a human being, smoke detector, infrared heat detector, etc. becomes aware of existing conditions requiring an activation of the emergency response system. This is considered the point of awareness.
- c. **Alarm** - The point at which awareness triggers an effort to notify the response system. An example of this is the transmittal of a local or central alarm to a public safety answering point (PSAP). It is difficult to determine the time interval during which this process occurs. An interval, which is called the *alarm transmission interval*, lies between the emergency event awareness point and the alarm point. This interval can be significant such as the alarm being transmitted to a distant commercial alarm monitoring organization which then retransmits the alarm to the local 9-1-1 and dispatch facility.
- d. **Notification** - Point at which a request for assistance is received by the PSAP. Generally, this is received in the form of a 9-1-1 call. Speed of answer is tracked from the first ring of the 9-1-1 phone until the phone is answered. The speed of answer for 9-1-1 calls is seconds or less 95% of the time. At times, requests for assistance are received over the PSAP's business line or through a telephone operator. Requests for assistance may come directly through the business phone, walk-in requests, or by visually seeing a need while driving in the area. The notification time does not start until received.

- e. **Call Processing Time** - The interval between the first ring of the 9-1-1 phone at the dispatch center and the time the computer aided dispatch (CAD) operator activates the fire station alerting devices. This is broken down into two additional parameters: *call answering interval* as explained in the notification above, and *dispatcher interval*, the time from when the call taker transfers the call to the appropriate dispatcher. This dispatcher activates the fire station alerting devices through the use of a CAD terminal. An established **pre-alert procedure** where the address and nature of the call is broadcast over the radio, as a means to assist fire companies in lowering their turnout time. This pre-alert is broadcast first to notify fire companies that an alarm is being received. The dispatcher finishes collecting additional information after which time the call is toned out and all information is given. Pre-alerts can add between 10 and 30 seconds to dispatch time but later reduce **turnout time** by responding units.
- f. **Reflex or Turnout Time** - The interval between the activation of fire station alerting devices and the time at which the crew notifies dispatch that the company is responding. During the reflex interval, crews cease other activities, put on appropriate protective clothing, determine the location of the call, and board and start the response apparatus. It is expected that the "responding" signal will be given when personnel are aboard the apparatus and the apparatus is beginning a response to the call. Turnout time when staff members are at the station should be less than two minutes. It is also recognized that when volunteers or off-duty personnel respond from home, turnout time will be longer than two minutes.
- g. **En Route Time** - The point at which the responding apparatus informs the dispatch center that they are responding to the alarm.
- h. **Travel Time** – This time begins at the **En Route time** and ends with the **On-Scene time**. When conducting a simulated response analysis, travel time is based on a 35 mph average.
- i. **On-Scene Time** - The point at which the responding unit arrives at the reported location of the emergency scene. Arrival is determined by actual physical arrival at the address of the emergency as displayed by CAD.
- j. **Initiation of Action and/or At Patient Time** - The point at which mitigation of the event begins. This includes size-up, deployment, etc. This varies due to access associated with building size or traversing terrain in order to reach the patient.
- k. **Termination of Incident** - The point at which the unit(s) has completed the assignment and is available to respond to another request for service.
- l. **Agency Response Time** - Includes those elements directly under the control of the fire service (*Reflex Time* plus *Travel Time*).
- m. **Customer Time** - This measure indicates the customer's perception of the performance of the emergency service system. It includes those factors that, in the customer's perception, reflect the performance of the fire service whether or not the fire service directly controls those elements. **This is the interval from the first ring of the phone at the dispatch center to the time the first unit arrives on scene.**

## ***CASCADE of EVENTS***

### **Pre-Response Elements**

**Event Initiation (soft data)**

**Emergency Event (soft data)**

**Alarm (soft data)**

**Notification - alarm is reported (hard data)**

### **Response Elements**

**Alarm Processing (hard data)  
benchmark = 75 seconds (with pre-alert)**

**Turnout Time - notification to responding  
(hard data) benchmark = 120 seconds**

**Travel Time - responding to arrival (hard data)**

**On-Scene Time - unit arrives (hard data)**

### **Post-Response Elements**

**Initiation of Action - operations begin (soft data)**

**Termination of Incident (soft data)**

**1. High Density Residential Properties**

- Arbor Terrace Apartments (High Risk 44.80)
- Casa Grande Apartments (High Risk 44.80)
- Garden View Apartments (High Risk 40.33)
- President Hotel Apartments (High Risk 47.20)
- Stanford Drive Apartments (Moderate 38.87)

**2. Adult Care/Assisted Living Facilities**

- Ashley Gardens (Moderate 38.33)
- Mira Vista (Moderate 37.33)
- Mountain Glen Center (Moderate 36.40)
- Logan Creek Center (Moderate 36.40)
- Salem Village (Moderate 37.00)
- The Bridge (Moderate 38.80)
- Vintage (High Risk 44.80)

**3. Skagit Valley Hospital (major expansion starting in 2005) (High Risk 47.20)**

**4. Skagit County Jail (Moderate 37.17)**

**5. Churches**

- Bethany Covenant (Moderate 29.11)
- Emanuel (High Risk 41.20)
- Salem Lutheran (Moderate 29.11)

**6. Commercial Facilities**

- Most of downtown (old, ordinary construction, multi-story, zero lot-line) (Moderate 37.20)
- Lincoln Theatre (High Risk 44.18)
- Lowe's Hardware (High Risk 40.30)
- Performing Arts Center (Moderate 37.87)
- Wal-Mart (Moderate 38.85)

**7. Schools**

- Centennial Elementary (Moderate 35.20)
- Immaculate Conception (Moderate 34.00)
- Jefferson Elementary (High Risk 41.20)
- LaVenture Middle School (Moderate 38.80)
- Lincoln Elementary (High Risk 41.20)
- Little Mountain Elementary (Moderate 34.00)
- Madison Elementary (High Risk 41.20)
- Mt. Baker Middle School (High Risk 42.40)
- Mount Vernon Christian (High Risk 41.20)
- Mount Vernon High School (High Risk 46.53)
- Skagit Valley College (Moderate 37.17)
- Washington Elementary (High Risk 43.60)

A fire demand zone map and a station response area map are included as appendices #3 and #4 in section 12 of this strategic plan document. A full, descriptive listing of each fire demand zone is presented in the following table:

	Zone	Description
1	01E	This zone is in the eastern portion of the city. It is a portion of Fire District #1. It lies south of E. Division and is largely undeveloped. Structures within the zone are all residential. Water supply is limited and the response plan calls for mutual aid water tenders on all alarms for structure fires. Primary and secondary responses are from Station 3 and Station 1 respectively.
2	01N	This zone is in the most northern portion of the response zones. It is a portion of Fire District #1. It includes Francis and Swan Roads. This area is largely farmland with development occurring along Swan Road. Structures within the zone are primarily residential. Water supply is limited and the response plan calls for mutual aid water tenders on all alarms for structure fires. Primary and secondary responses are from MVFD Station 2 and Station 3 respectively.
3	01S	This zone is in the southern portion of the response zones. It includes a portion of Fire District #1. It includes parts of Blackburn Road and Little Mountain Road and the residential neighborhood served by Cedar Hills Drive. This area is primarily residential and undeveloped, with one church located within the zone. Water supply is limited (Average 706 gpm) in the Cedar Hills neighborhood and relies on a pumping station at Blackburn Rd. The South and East portions are not well served by hydrants. Primary and secondary responses are from MVFD Station 1 and Station 3 respectively.
4	01SE	This zone is in the most Southeasterly portion of the response zones. It is a portion of Fire District #1. The primary road through this zone is Little Mountain Road. This area is largely rural and undeveloped. Structures within the zone are primarily residential with a few commercial horse stables. Water supply is limited and the response plan calls for mutual aid tenders on all alarms for structure fires. Primary and secondary responses are from MVFD Station 1 and Station 3 respectively.
5	01WN	This zone is in the most Northwesterly portion of the response zones. It is a portion of Fire District #1. The primary road through this zone is the Riverbend Road. This area is largely rural and undeveloped. Structures within the zone are primarily residential with a few commercial greenhouse operations. Water supply has been improved along Riverbend Road with adequately placed hydrants. Primary and secondary responses are from MVFD Station 2 and Station 1 respectively.



6	01WS	This zone is in the Northwesterly portion of the response zones. It is a portion of Fire District #1. The primary road through this zone is the Riverbend Road. This area is largely rural and undeveloped. Structures within the zone are primarily residential with a commercial farm. Water supply has been improved along Riverbend Road with minimally placed hydrants. Primary and secondary responses are from MVFD Station 1 and Station 2 respectively.
7	01IC	This zone is the old downtown area of Mount Vernon. It also contains commercial cold storage, Alf Christensen Seed Company, the President Hotel (5 story apartment building), and the County Courthouse complex. The structures are primarily commercial, with ordinary (masonry) and/or fire resistive construction. The railroad bisects this zone from north to south, west of the freeway. The response plan for this area calls for an additional mutual aid ladder truck and a fire engine from Burlington on the second alarm. Primary and secondary responses are from Station 1 and Station 3 respectively.
8	01IN	This area is a central zone located north of Division. It is bordered on the west by the Skagit River. It is divided by the freeway zones. The zone is a mixture of commercial and residential neighborhoods. The area west of the freeway is all commercial. The railroad follows the west side of the freeway crossing under the freeway at Cameron Way. The area east of the freeway is largely residential with many older homes converted into apartments. The most easterly part of this zone is the Mount Vernon High and Immaculate Conception Catholic schools. The area is served well with hydrants. Primary and secondary responses are from MVFD Station 1 and Station 2 respectively.
9	01IS	This area is the most southwestern portion of the city. It is divided by freeway zones. The west half is a mixture of residential and commercial. The railroad bisects this zone just west of the freeway. The western half contains the Skagit County Fairgrounds, Schenk Meat Packing, the Christian school, and the Casa Grande Apartments (4 story). The area is served well by hydrants, although many of the hydrants are older. The eastern half is primarily residential. It contains Lincoln and Jefferson Schools and the Skagit Valley Hospital complex. It also has numerous churches. Primary and secondary responses are from MVFD Station 1 and Station 3 respectively.
10	01ISE	This zone is in the southern portion of the response zones. It includes the most eastern part of Blackburn Road and a section of Little Mountain Road. This area is primarily undeveloped, with most of the residential area located on Blackburn. A majority of the zone is Little Mountain Park. Water supply is limited and the response plan calls for mutual aid water tenders on all structure fire alarms. Primary and secondary responses are from MVFD Station 1 and Station 3 respectively.

11	011W	This zone is the portion of the city west of the Skagit River. It is a mixture of commercial and older residential homes. It contains the Washington Elementary School. There are an appropriate amount of older hydrants. The fire flow has been improved since the last Fire Master Plan with an upgrade of the water main crossing the river. Primary and secondary responses are from Station 1 and Station 3 respectively.
12	012E	This zone is located in the Northeast portion of the response zones. It is primarily residential with a significant number of multi-family, multi-story dwellings (north 26 <sup>th</sup> Street, Austin Lane, Fulton Street, Salem Lutheran, LaPaloma, etc.). It contains commercial structures along E. College Way and N. LaVenture. Skagit Valley College, Centennial Elementary, and LaVenture Middle schools are located within this zone. The Northern portion is undeveloped bordering the Skagit Valley River. The area is well served by hydrants. Primary and secondary responses are from MVFD Station 2 and Station 3 respectively.
13	012W	This zone is located in the Northern portion of the city. It is divided in the west end by the freeway zones. It is also divided by the railroad tracks. West of the freeway is all commercial (Lowe's, Comfort Inn, NC Machinery). Central between the freeway and the railroad tracks is primarily commercial with some residential in the Northeast portion. East of the railroad is predominately residential with commercial near College Way. Madison School is located in the Southern portion of this zone. The area is served well by hydrants. Primary and secondary responses are from Station 2 and Station 1 respectively.
14	013N	This zone is located in the eastern portion of the city north of E. Division St. It is primarily newer residential neighborhoods. Haggen grocery store is the largest commercial structure. The eastern most portion is currently under residential development (800 units). It is well served by hydrants. Primary and secondary responses are from Station 3 and Station 2 respectively.
15	013S	This zone is located in the southeast portion of the city. It is primarily residential with a substantial number of senior housing and multifamily dwellings (Mira Vista, Mountain Glen, Mount Vernon Care Center, The Bridge). Also located in this area are Mount Baker Middle and Little Mountain Elementary schools. The southeast portion of this zone is a golf course with ongoing higher end residential development. The area is well served by hydrants. Primary and secondary responses are from Station 3 and Station 1 respectively.
16	0125N	This zone is Interstate 5 northbound from Anderson Road to Kincaid Street. Cedardale FD provides automatic mutual aid for motor vehicle accidents because of accessibility. Primary and secondary responses are from Station 1 and Station 3 respectively.

prevention staff from maintaining the same level of code enforcement inspections as was previously done. The success of the fire prevention staff's work was reflected in the broad knowledge of fire prevention activities by the customers that returned the customer feedback surveys. Their workload was also noticed in the customer feedback survey comments about some service problems associated with the expediency of returned phone calls or backlogs of permit/occupancy questions on new construction projects.

### Fire Department Training

The fire department training is handled through the assistant chief of training and operations and one staff captain assigned to safety and training. Entry level firefighters are trained to NFPA 1001, Firefighter I (FF1) standards. This is accomplished differently for career and volunteer (part-time) members.

An entry level career member is typically sent to the Washington State Firefighter Training Academy located near North Bend, Washington. While at the academy the candidate receives twelve weeks of intensive training. This training culminates in an International Fire Service Accreditation Commission (IFSAC) FF1 certification for each academy graduate. After completion of the academy, the new member will receive another two weeks of in-house training for skill checks, training in local standard operating guidelines, and pumper operator training. Occasionally a new member will have already completed the state academy or its equivalent in which case they start immediately with the in-house training.

The entry level volunteer firefighter is typically sent through the local Skagit County Firefighter Recruit Academy. This local academy is slightly shorter (ten weeks) and less intense but also culminates with IFSAC FF1 certification. The in-service training program is designed to be performance based. The program is delivered primarily through company level instruction and in-house experts. For new and higher level skills, outside expertise is often used to deliver particular subjects (supervisory subjects, special operations, new techniques, or equipment).

Whenever possible the training delivery is designed to promote hands-on activities. A four story fire training tower at the local college is utilized heavily for training. On occasion acquired structures are donated to MVFD and are used to the fullest extent possible. Also, the city shops are the frequent location for heavy lifting and auto extrication drills. Props are constructed as needed and other adjuncts utilized to create scenarios that are as realistic as possible.

The apparatus operator training is currently being expanded. In addition to the initial training that career members receive, skill sheets and an increased frequency of in-service training has been incorporated into the training plan. This addresses specific needs identified and ensures competency using new or updated equipment. Volunteer members have the opportunity to receive this training after successfully completing probation. An incremental training program in the areas of utility, rescue, engine operations, and aerial operations for the volunteer members allows them to gain the knowledge and skills in a progressive and safe manner while providing them with adequate opportunities for practice and mentoring. Each subject area within the apparatus operator program is addressed at least every three years.

Advanced training in special operations such as hazardous materials response, technical rescue, weapons of mass destruction, and wildland firefighting is currently provided on a voluntary basis. There has been a concerted effort in the last few years to increase the MVFD levels of expertise and training in these vital areas. This is being done in an attempt to expand a solid foundation of knowledge of all response areas throughout the fire department. In coordination with these efforts, MVFD has been working with the Skagit County Department of Emergency Management, other local fire agencies, industry, and agencies from other counties to design a system through which these types of services can be delivered in a timely and efficient manner. For example, contact with local industry and government agencies have led to identification of specific chemical hazards within the community, cooperative training to address these hazards, and the formation of an incident analysis team.

The past couple of summers have produced significant wildland fire seasons statewide. MVFD has been very active in statewide mobilizations with several department members being trained to cover specific positions of responsibility on major wildland fires. MVFD personnel complete all of the required training in-house as part of an inter-local agreement for a confined space response team that is currently nearing completion. These activities are becoming *blueprints* from which to borrow and build other special operation activities as the need becomes identified and defined.

The training levels of emergency personnel, the department's involvement in the county recruit academy at the college, and the use of the training facilities at the college would indicate a significant training workload for the part-time assignment of two administrative personnel. This is reflected in the use of shift personnel to augment department training activities.

### Emergency Staffing

In reviewing the current situation for MVFD, several facts were revealed. The fire department has three fire stations. The administrative fire station staffs one fire engine 24 hours-a-day with two 24 hour shift personnel; on occasion three personnel are available. Two additional 10 hour day-shift personnel are routinely scheduled for duty. Additional equipment is also staffed by volunteers and off-duty career personnel during emergency recall when available. Both substations' fire engines are also staffed 24 hours-a-day with two 24 hour shift personnel and a small number of volunteers that strive to staff fire equipment as needed and when available. It is estimated by MVFD that during the daytime hours the volunteer response to emergencies will produce approximately one to two volunteer personnel when volunteers are tapped for an alarm.

During weekdays, 8:00 AM to 5:00 PM, daytime staff members, chief officers, and a small group of volunteers available during normal work hours help to maintain a minimum response to commercial structure fires and large incident medicals and/or motor vehicle crashes. Major incidents, incidents at pre-determined target hazards, and multiple simultaneous emergencies of any substance stress this model to the edge of its ability to provide service. Automatic and mutual aid partnerships with surrounding fire departments backfill the service delivery system as needed. Often these partnerships render fairly rapid response, but on occasion the use of this type of backup increases response times and diminishes the level of service normally supplied by MVFD when available. In the last five years, the incidents requiring backup from other agencies has been on the increase.

MVFD has thirty-three career members and twenty-five volunteer members, many of which are cross-trained for both fire and EMS. During normal weekday work hours these personnel can produce only a minimal response to major incidents since many of the volunteers cannot leave work for emergencies. After normal weekday work hours, a slightly better response is produced for major emergencies, target hazard incidents, and multiple simultaneous incidents due to the availability of a larger number of volunteers. The administrative staff supplement the after hours on-duty crews by responding from home on major incidents. Also, chief officers share the "Duty Officer" responsibilities through a rotation that places them on call one week at a time. Staff vehicles provide for an emergency response from home to emergencies.

The emergency responses for MVFD are dispatched from a centralized 9-1-1 communication center operated by Skagit County that coordinates automatic and mutual aid

communities arrive. The estimated time of arrival of outside agencies by MVFD staff is on average eleven minutes from the time they are toned out. This is not exactly how every fire would be handled but it is similar to how a daytime structure fire would be handled. During hours outside of the normal daytime workweek the situation is exacerbated by the delay of the daytime personnel responding from home if available. This scenario is also compounded if any of the MVFD apparatus are tied up on other calls. MVFD responds to an average of over eight emergency calls per day, 365 days per year and even a routine medical or vehicle crash produces similar situations on occasion. A routine heart problem can easily turn into two people performing CPR, two ALS personnel administering drugs and performing defibrillation while others set up the gurney for packaging the patient. Motor vehicle crashes with the potential for extrication or fuel leaks create the same type of drain on equipment and staffing.

To clearly understand the ramifications of the current deployment of equipment and personnel, historical average response times, fractal percentage response times, and the personnel needed to perform routine fire ground and emergency medical tasks will be delineated.

### Response Times

The above system and resources provided an estimated emergency response time of a first-due company in the year 2003 on an average of 6.42 minutes. During general alarm structure fire situations, MVFD reports an estimated 10 person average response estimate for 2004, down from 12 in 2003. This average represents all structure fire types, residential and commercial. It also represents low response numbers during normal weekday work hours and slightly higher response numbers after normal weekday working hours due to volunteer and off duty officer response. These two statistics must be completely understood. The response time average is only for the first due company and only includes the two firefighters on that apparatus. The average number of personnel responding is the overall average of all responders, responding to all fires. It should be understood that many of those personnel are far slower in response time than the first due company. Also, it must be noted that to average 10 firefighting personnel on structure fires during the year a significant number of structure fires receive a response less than that number.

In addition to average response numbers and times, it is important to understand how many times the system is overloaded. From January 1, 2004 to October 1, 2004, the fire department was on an active call 187 times when it received additional calls. Each individual first due response area for the MVFD fire stations were uncovered due to other calls and received an additional call

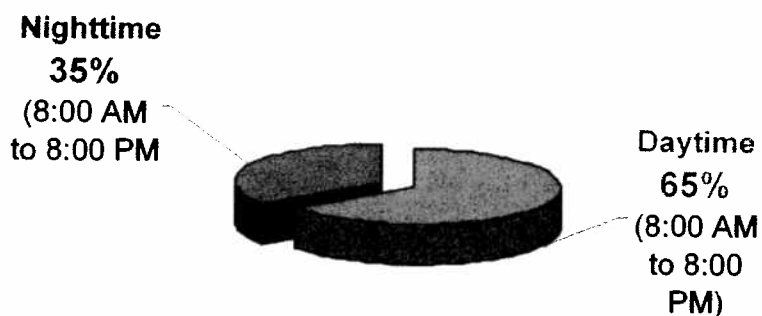
in their first-due area. This happened fifteen times in the station no.1 area, ten times in the station no.2 area, and four times in the station no.3 area. These calls were handled by other engine companies from outside their own first due area. These types of situations, due to increased call volume, are on the rise and contribute to delayed response times. The projected average response time for emergency calls in 2004 is 7:24, up 42 seconds per call from 2003.

The average response times and the average number of firefighters responding to structure fires are excellent indicators of both healthy and not so healthy trends affecting the fire department services, but they are not the best indicator of performance. The best way to set response time objectives is to refer back to the need for first responder medical personnel to arrive before the beginning of heart muscle damage or the firefighters with an effective firefighting response force to assemble on scene and perform necessary tasks such as rescue and extinguishment prior to flashover. The best response time indicators of performing in a timely manner to accomplish those tasks are fractal response percentages. MVFD reports that the 2003 and 2004 90% fractal response times were 6:53 and 6:40 respectively. That means that 90% percent of the time the first responding apparatus arrived on an emergency scene prior to or at those times.

Using the previous average response times for 2003 and 2004 respectively, the fractal response times would indicate overall performance in 2004 has not degraded as badly as originally thought but that the outlying 10% that did not meet the 6:40 response time could have been worse than the year before, driving the average response time up. If that turns out to be the trend in future years, it could be a reflection of the increasing number of calls that drop in a first due area when the personnel are already tied up on previous calls. One additional stress on response times is the need to respond multiple fire engines to an emergency due to the necessity to assemble personnel on scene two at a time. Normally three or four person fire engines could handle some tasks without needing extra fire engines, thus taking less equipment out of its first due area.

Peak emergency demand periods were discussed concerning emergency calls and how call volume concentration contributes to delays in response time that would affect overall fractal performance indicators. When emergency calls between January 1, 2001 and July 12, 2004 were analyzed it revealed that 65% of all emergency calls during that period were received between the hours of 8:00 AM and 8:00 PM. This statistic would indicate that the chance for simultaneous emergency calls is greatest during a time frame when it is the most difficult to garner a volunteer response from home due to normal working hours. Many communities rectify this issue with the use of peak demand units that work either twelve or ten hour daytime shifts.

### Percentage of Emergency Calls



*Emergency calls by time of day*

Other fractal response times for MVFD are reflected in the following spreadsheet:

## 2003 - 2004 Response Summary

Unit	80% Agency Response Fractal	90% Agency Response Fractal	95% Agency Response Fractal
<b>Fire Calls</b>			
E111	0:05:54	0:06:36	0:07:14
E112	0:04:30	0:04:36	0:04:38
E121	0:06:18	0:06:22	0:06:23
E131	0:06:54	0:08:19	0:08:50
E132	0:04:43	0:04:43	0:04:43
L125	0:05:45	0:05:57	0:06:16
All Fire Units	0:05:51	0:06:36	0:08:05
<b>Explosions, Overheat, Overpressure - No Fire</b>			
E111	0:07:23	0:07:47	0:08:00
E112	0:00:00	0:00:00	0:00:00
E121	0:06:07	0:06:07	0:06:07
E131	0:05:54	0:06:00	0:06:04
E132	0:00:00	0:00:00	0:00:00
L125	0:05:06	0:05:09	0:05:11
All Fire Units	0:06:07	0:06:57	0:07:35
<b>Rescue &amp; Emergency Medical Services</b>			
E111	0:05:11	0:06:37	0:07:54
E112	0:05:35	0:07:36	0:08:19
E121	0:05:14	0:05:25	0:05:30
E131	0:06:30	0:07:30	0:08:14
E132	0:06:25	0:06:25	0:06:25
L125	0:05:16	0:05:50	0:06:20
All Fire Units	0:05:30	0:06:26	0:07:32



**Hazardous Conditions**

E111	0:06:49	0:07:14	0:08:46
E112	0:00:00	0:00:00	0:00:00
E121	0:00:00	0:00:00	0:00:00
E131	0:07:50	0:08:29	0:09:06
E132	0:00:00	0:00:00	0:00:00
L125	0:05:27	0:05:33	0:05:36
All Fire Units	0:06:45	0:07:16	0:07:58

**Service Calls**

E111	0:06:30	0:06:48	0:07:19
E112	0:00:00	0:00:00	0:00:00
E121	0:00:00	0:00:00	0:00:00
E131	0:06:47	0:06:47	0:06:47
E132	0:00:00	0:00:00	0:00:00
L125	0:05:47	0:06:01	0:06:29
All Fire Units	0:06:25	0:06:50	0:07:41

**Good Intent Calls**

E111	0:06:44	0:07:35	0:10:15
E112	0:00:00	0:00:00	0:00:00
E121	0:00:00	0:00:00	0:00:00
E131	0:06:40	0:06:49	0:06:53
E132	0:00:00	0:00:00	0:00:00
L125	0:05:33	0:05:56	0:06:14
All Fire Units	0:06:33	0:07:17	0:08:19

**False Alarm - False Call**

E111	0:06:10	0:06:52	0:07:33
E112	0:08:09	0:08:28	0:08:37
E121	0:06:33	0:06:33	0:06:33
E131	0:06:45	0:07:09	0:07:30
E132	0:00:00	0:00:00	0:00:00
L125	0:05:27	0:06:06	0:06:53
All Fire Units	0:06:05	0:06:51	0:07:28

**Total Calls for Period: 2049****NOTES:**

The numbers above reflect first responding unit times by units not total calls for the period.

Some calls require the response of more than one medic or fire unit.

This data is from the SunPro RMS database as of October 15, 2004.

This data was provided in the strategic planning process by MVFD staff.

This data reflects the time period of August 1, 2003 through September 30, 2004.

One of the key issues that must be developed to properly understand what is needed to be an effective firefighting response force or an effective force for any type of emergency is the actual tasks that must be performed by initial arriving personnel. Since the 1992 master planning process NFPA, state, and federal guidelines have changed significantly, increasing the number of firefighters necessary to safely combat fires. The following is a task analysis conducted by MVFD staff for recommended responses to various emergencies that they respond to on a routine basis and the associated table of the actual MVFD responses to each emergency:

**Residential Structure Fire:** 14 personnel needed within 8 minutes to accomplish the (1000 GPM Fire flow) following tasks:

Incident Command (1)

Safety/Recon (1)

Pump Operator (1) - assuming a single engine/pump will accomplish the task

Fire Attack/Search & Rescue (4) - both state and federal required minimums

Back-up for interior attack (including hose handling support) (2)

Standby/RIT (2)

Ventilation (3)

The above does not include the following tasks: water supply, salvage, exposure control, second pump operator, rehab and air supply, crew rotation, care for occupants, etc. The MVFD standard response is: 1 duty chief, 2 engines (2 FF's each), 1 ladder (2 FF's), 1 rescue (2 volunteers). **Average personnel responding: 9.**

***MVFD STANDARD FIRST ALARM RESIDENTIAL FIRE RESPONSE***  
Fire Flow of 500 G.P.M.

<i>FIRE APPARATUS RESPONDING</i>	<i>MINIMUM APPARATUS STAFFING</i>
1 Duty Officer	1
2 Fire Engines	4
1 Aerial Ladder Truck	2
1 Rescue and/or Squad	2 Volunteers
<b>5 TOTAL</b>	<b>9 TOTAL</b>

Wildland/Brush Fire: 12 personnel needed within 8 minutes to perform the following:

Incident Command (1)  
 Safety/Recon (1)  
 Pump Operator (1)  
 Fire Attack, Hose Line deployment (6)  
 Water Supply (1)  
 Hand Tool Crew- (2)

Does not include rehab or crew rotation. MVFD typically does not respond a water tender but responds a third engine when available. MVFD does not have a specific brush unit. MVFD standard response is: 1 duty officer, 2 engines (2 FF's each), 1 additional engine when available (2 FF's), 1 rescue (2 volunteers). **Average personnel responding: 9.**

***MVFD STANDARD FIRST ALARM WILDLAND/BRUSH FIRE RESPONSE***

<i>FIRE APPARATUS RESPONDING</i>	<i>MINIMUM APPARATUS STAFFING</i>
1 Duty Officer	1
2 Fire Engines	4
1 additional eng. when available	2
1 Rescue and/or Squad	2 volunteers
<b>5 TOTAL</b>	<b>9 TOTAL</b>

Emergency Medical Call: 3 fire personnel needed within 6 minutes (plus 2 EMT/Paramedics from ambulance) to accomplish the following tasks:

Patient Assessment (1)

If Heart Attack/CPR- CPR (compressions) (1), ventilation/breathing (1), defibrillator (1), medication preparation (1)

The above does not include care for family or gathering patient and medical history. The same personnel must accomplish patient packaging and loading. MVFD standard response is: 1 engine (2 FF's) **Average personnel responding: 2.** The ambulance responds with 2 personnel from various locations around the county.

***MVFD EMERGENCY MEDICAL RESPONSE (BLS and ALS Medical Aid Calls)***

<i>FIRE APPARATUS RESPONDING</i>	<i>MINIMUM APPARATUS STAFFING</i>
1 Engine or Rescue	2
1 Ambulance ( <i>non-fire</i> )	2 ( <i>non-fire</i> )
<b>2 TOTAL (1 non-fire)</b>	<b>4 TOTAL (2 non-fire)</b>

***MVFD STANDARD TECHNICAL OR MARINE RESCUE FIRST RESPONSE***

<b><i>FIRE APPARATUS RESPONDING</i></b>	<b><i>MINIMUM APPARATUS STAFFING</i></b>
1 Duty Officer	1
2 Fire Engines or Rescue w/Engine	4
1 Ambulance ( <i>non-fire</i> )	2 ( <i>non-fire</i> )
<b><i>4 TOTAL (1 non-fire)</i></b>	<b><i>7 TOTAL (2 non-fire)</i></b>

***MVFD INVESTIGATION OF HAZARD OR A COMPLAINT RESPONSE***

<b><i>FIRE APPARATUS RESPONDING</i></b>	<b><i>MINIMUM APPARATUS STAFFING</i></b>
1 Fire Engine	2
<b><i>1 TOTAL</i></b>	<b><i>2 TOTAL</i></b>



## Acceptable Risk

The planning team discussion concerning current levels of service, acceptable risk, and cost led to considerable interaction among the team members on ensuring the provision of fire and emergency medical services at least similar to their current status. The overall team desire was to reduce response times so that the service level objectives that were stressed in the 1992 master plan were the minimums that MVFD would make every effort to attain. This would only be possible by relieving the current stress on the service delivery model caused by low staffing response numbers and the safety issues of operating two-person engine companies. Also, two-person engine company staffing delays the time it takes to get an effective firefighting force on scene at major fires.

Using NFPA recommendations, U.S. Fire Administration guidelines, and American Heart Association standards, the 1992 master plan and this document recognize the preferred initial response times for fires and emergency medical calls to be five minutes and four minutes respectively. The high priority service level objectives in the 1992 master plan realistically recommended *target response times* for the arrival of the initial response of fire service units for fires and emergency medical calls at five minutes. This was to be accomplished by increasing the total 24 hour fire department staffing to a minimum of ten on-duty firefighters by 2001 and to construct a third fire station. After thorough analysis it appears the station location work and the construction of the new station have had an effect of equalizing distribution, yet staffing issues have not been resolved. This stretching of limited staffing by the use of two person engine companies at three separate locations and ever increasing call volumes appear to be exacerbating an already weak part of the MVFD service delivery system. New national standards on the safe deployment of personnel at emergency scenes have highlighted this weakness. Not only have response times failed to meet the desired service level objectives but they have been moving in the wrong direction.

It is an unacceptable risk to continue to have low staffing numbers arriving in slower response times each year, well over six minutes for the majority of the calls. An acceptable risk would be to strive to meet the original 1992 service level objectives through the adoption of a staffing plan to bring the response from all three stations up so that the engine companies and the ladder truck are staffed with three personnel. Additionally a peak demand unit should be established to support overlapping calls during times of peak demand.

higher than that for firefighters assigned to 24 hour shifts. This topic was discussed in a captain's meeting on April 29, 2004 and is reflected in the minutes of that meeting. The workload RUR delineated at that meeting was approximately 12 hours.

Areas that were highlighted as positive attributes of the MVFD were noted as: the cost-effective and efficient use of the combination (career/volunteer) model of service provision, the fact that staff have been successful in keeping the fire loss to a minimum even without adequate staffing numbers, the excellent condition of most of the equipment and two of the fire stations, and the last five years' low fire loss.

It was a consensus of the planning team that MVFD was currently providing excellent services for a reasonable cost but that the service delivery model was too frequently stretched beyond its capacity, especially the two-person engine companies. The current risk versus the cost analysis led the planning team members to a conclusion that the current risk at MVFD is increasing to a level that would be considered unacceptable unless significant provisions are made to reduce the stress on the system in the future. If the service level objectives established over twelve years ago are to be achieved, staffing levels need to keep pace with growth and national firefighting standards for applying an effective firefighting force within a minimal amount of time.

Using the analysis of the current levels of service provided by MVFD, the planning team members began to formulate opinions that would be factored into discussions on goal setting later in the planning process. Discussions on current risk, acceptable risk, cost, acceptable cost, benchmarks, constituent feedback, the service delivery system stress, fractal response times, effective fire response force analysis, RUR's and planning team members' opinions were summarized as an important foundation for future phases of the strategic planning process. These discussions were viewed in light of the vision, mission, and value statements as well as the SWOT review.

As stated earlier, staffing issues and station locations for deployment will be thoroughly reviewed through implementation of specific objectives to complete the MVFD Deployment Process. This process will establish a written *Standard of Cover* that the City Council can adopt for MVFD.

## **CUSTOMERS and THEIR NEEDS**

*THE FOLLOWING LIST IS ORGANIZED IN ALPHABETICAL  
FORMAT, NOT INDICATING IMPORTANCE OR PRIORITY.*

### **Customers**

- ⇒ Allied agencies
- ⇒ Businesses
- ⇒ Citizens
- ⇒ City Council
- ⇒ City departments (i.e. planning and building)
- ⇒ County government
- ⇒ Employees
- ⇒ Migrant workers
- ⇒ Mutual aid departments
- ⇒ Non-resident businesses
- ⇒ Property owners
- ⇒ School department
- ⇒ Senior citizens
- ⇒ Taxpayers
- ⇒ Tomorrow's customers
- ⇒ Tourists/guests/visitors
- ⇒ Transient population
- ⇒ Volunteers
- ⇒ Youth

***THE FOLLOWING LIST IS ORGANIZED IN ALPHABETICAL  
FORMAT, NOT INDICATING IMPORTANCE OR PRIORITY.***

## **Services**

- ⇒ Automatic and mutual aid
- ⇒ Code enforcement
  - Inspections
  - Permits
  - Plans review
- ⇒ Emergency management
- ⇒ EMS
- ⇒ Event standby
- ⇒ Fire investigations
- ⇒ Fire suppression
- ⇒ Flood response
- ⇒ Hazardous material response
- ⇒ Limited technical rescue
- ⇒ Public assist
- ⇒ Public education
- ⇒ Training (Interdepartmental and community)
- ⇒ Weapons of mass destruction (WMD) response



*THE FOLLOWING LIST IS ORGANIZED IN ALPHABETICAL  
FORMAT, NOT INDICATING IMPORTANCE OR PRIORITY.*

## **Weaknesses**

- ⇒ Collaboration with partner agencies
- ⇒ Education of city council on fire department operations
- ⇒ Financial resources
- ⇒ Inefficient 911 Center
- ⇒ Inefficient delivery of services
- ⇒ Lack of opportunities for EMS
- ⇒ Limited opportunities for volunteers to apply their skills
- ⇒ Limited opportunities to train with partnering agencies
- ⇒ Limited regional resources
- ⇒ Public education on fire department operations
- ⇒ Retaining an effective volunteer program
- ⇒ Staffing levels
- ⇒ Time to address weaknesses
- ⇒ Too many “Irons in the fire” for staff

## MISSION STATEMENT

The mission statement of the MVFD was reviewed to ensure it represents the purpose of the fire department's existence. The planning team discussions concerning the mission statement revolved around simplicity and accuracy. The new mission statement aligns with the corporate values of the planning team. This new, clear, and concise mission statement reflects the actual purpose of the organization and is the basis for getting others to support the organization. The mission statement should be published in all regular newsletters and other correspondence to the MVFD customers.

### Mission Statement

**To protect the lives, property,  
and environment of Mount  
Vernon and to minimize losses  
when emergencies occur.**

## VISION STATEMENT

The planning team developed a vision statement that reflects how MVFD wishes to be viewed by its customers. Many planners confuse the customers with terms like vision statements, performance statements, future strategies, strategic issues, goals, and objectives while mixing meanings. This is one of the major reasons strategic plans usually collect dust on a shelf rather than being the living documents that they are intended to be.

The term vision statement for the purposes of this strategic plan refers specifically to a motto-type statement that is only for the purpose of capturing the spirit of the organization. It will become the hallmark of the organization, but it will not be confused with issues concerning completion measurement. All completion measurement will be dealt with in the goal setting segment of the strategic plan. The vision statement developed by the planning team is:

### Vision Statement

*Making a  
Positive  
Difference*

## ASSUMPTIONS

The planning team discussed assumptions that involved the areas of fire department operations directly under the department's influence and that all planning team members believed would happen, regardless of changes in the immediate future. Elected bodies usually focus their assumptions on relationships and processes. Fire departments usually focus on performance indicators and accomplishments. The MVFD assumptions were narrowly focused on only those areas that the planning team believed the fire department could ensure would continue. Several of the MVFD assumptions were developed by the planning team to send an informational message to the readers of the strategic plan, clearly stating how they believe MVFD will operate during the next five to ten years.

The assumptions developed by the planning team are as follows:

- ⇒ MVFD will continue to be a combination career/volunteer fire department.
- ⇒ MVFD will continue to offer services to Fire District #1.
- ⇒ MVFD will continue to provide high-quality fire prevention services.
- ⇒ MVFD will continue to review partnering opportunities and efficiencies with neighboring agencies.
- ⇒ MVFD's service population will continue to grow.

## ALTERNATIVES

The planning team discussed several alternatives that they knew would be controversial. They wanted the readers of the plan to understand that alternatives were broadly discussed, yet they knew, in many cases, controversy, energy, time, and money might prevent some of the concepts from being reviewed in significant detail. In an attempt to be very realistic, the team members only wished to list alternatives that might be pursued in the future if significant changes occurred that would necessitate looking closer at alternatives.

The alternatives that were discussed are as follows:

- ⇒ Changing the method of doing dispatch.
- ⇒ Elimination of fire department medical responses.
- ⇒ Enhance fire department medical services to ALS.
- ⇒ Entering into mergers, consolidations and/or fire authorities.
- ⇒ Provide fire department ambulance transport services.
- ⇒ Provide countywide EMS.
- ⇒ Provide countywide prevention.
- ⇒ Provide countywide training.



## **FUTURE ISSUES**

Using the values of the planning team, the draft vision statements, the mission statement, the draft risk analysis, fire department benchmarking, constituent feedback, and the SWOT review, the planning team developed a list of key future issues facing the fire department.

The goals and objectives that follow in the next section reflect how these future issues will be handled while still maintaining the desired levels of service. Finally, the priority goals established in Phase IV maximize the use of the organization's strengths and minimize the impact of its weaknesses while seeking to meet the challenges presented by these future issues.

It was determined that the items listed below would represent the issues that could significantly affect MVFD service delivery regardless of the day-to-day issues that the department is striving to resolve.

The key issues of the future for the department are as follows:

- ⇒ Decisions on level of services for MVFD EMS/Ambulance
- ⇒ Decisions on level of services for MVFD Hazmat
- ⇒ Diversification of the MVFD revenue stream
- ⇒ Funding of appropriate MVFD staffing levels
- ⇒ Funding of the MVFD Capital Improvement Program
- ⇒ Decisions on the level of MVFD Technical Rescue
- ⇒ Replacement and/or relocation of MVFD Station No.1
- ⇒ Opportunities to restructure the MVFD volunteer program

## 2. Develop and Implement an Emergency Medical Delivery System to Meet the Needs of Mt. Vernon

### Objective A. Implement 1<sup>st</sup> Response Advance Life Support Services

#### Action Items

1. **Obtain satisfactory advanced life support protocols**  
 Responsible Party: S. Abel Completion Date: Feb. 2005
2. **Purchase advanced life support equipment**  
 Responsible Party: M. Malone Completion Date: Mar. 2005
3. **Obtain a physician supervisor for training**  
 Responsible Party: M. Malone Completion Date: Mar. 2005
4. **Hire paramedic personnel**  
 Responsible Party: S. Abel Completion Date: Mar. 2005
5. **Upgrade responses to advanced life support**  
 Responsible Party: M. Malone Completion Date: May 2005

### Objective B. Analyze and Make Recommendations on MVFD Providing Ambulance Services

#### Action Items

1. **Contract to conduct a feasibility study/business plan for transport services**  
 Responsible Party: S. Abel Completion Date: Apr. 2005
2. **Report recommendations for transport services to the City Council**  
 Responsible Party: S. Abel Completion Date: Apr. 2005

### Objective C. Review and Make Recommendations to Medical Program Director on Criteria Based Dispatching

#### Action Items

1. **Review and analyze the potential for criteria based dispatching**  
 Responsible Party: M. Malone Completion Date: Oct. 2005
2. **Make criteria based dispatching recommendations to Emergency Medical Services Commission**  
 Responsible Party: S. Abel Completion Date: Nov. 2005

### **3. Enhance MVFD Communication with Staff, Public, and Elected Officials**

#### **Objective A. Establish an Active Labor/Management Team**

##### Action Items

1. **Develop a labor/management team Standard Operating Guideline**  
**Responsible Party:** M. Malone **Completion Date:** Jan. 2005
2. **Establish actual committee**  
**Responsible Party:** S. Abel and Union President **Completion Date:** Feb. 2005
3. **Establish a regular meeting schedule**  
**Responsible Party:** Labor/Management Committee **Completion Date:** Feb. 2005

#### **Objective B. Develop and Deliver Educational Opportunities for Elected Officials**

##### Action Items

1. **Review potential educational opportunities for elected officials**  
**Responsible Party:** C. Wishert **Completion Date:** Nov. 2005
2. **Develop specific materials/presentations for elected officials**  
**Responsible Party:** C. Wishert **Completion Date:** Jan. 2006
3. **Implement educational opportunities for elected officials**  
**Responsible Party:** S. Abel **Completion Date:** May 2006

#### **Objective C. Develop a Mount Vernon Fire Department Marketing Plan**

##### Action Items

1. **Appoint a MVFD marketing committee**  
**Responsible Party:** S. Abel **Completion Date:** Dec. 2005
2. **Review potential public marketing concepts**  
**Responsible Party:** C. Wishert **Completion Date:** Oct. 2006
3. **Draft MVFD public marketing plan**  
**Responsible Party:** C. Wishert **Completion Date:** Nov. 2006
4. **Adopt a MVFD marketing plan**  
**Responsible Party:** S. Abel **Completion Date:** Dec. 2006



## 5. Enhance the MVFD Volunteer Program

### Objective A. Develop Opportunities for the Application of Skills by Volunteers

#### Action Items

1. **Brainstorm volunteer opportunities for enhanced application of skills**  
**Responsible Party:** Management Team **Completion Date:** May 2005
2. **Document potential volunteer opportunities**  
**Responsible Party:** Management Team **Completion Date:** June 2005
3. **Review volunteer opportunities with the labor/management committee**  
**Responsible Party:** S. Abel & Management Team **Completion Date:** Sept. 2005
4. **Finalize volunteer opportunities with the MVFD volunteers**  
**Responsible Party:** S. Abel **Completion Date:** Jan. 2006

### Objective B. Develop Potential Benefits and Incentives for Volunteers

#### Action Items

1. **Establish volunteer incentive committee**  
**Responsible Party:** S. Abel **Completion Date:** Jan. 2006
2. **Brainstorm potential benefits and incentives that would increase participation**  
**Responsible Party:** Volunteer Incentive Committee **Completion Date:** Feb. 2006
3. **Determine which incentives will efficiently increase volunteer participation**  
**Responsible Party:** S. Abel & Vol. Incentive Com. **Completion Date:** Apr. 2006
4. **Document new volunteer benefits and incentives**  
**Responsible Party:** S. Abel **Completion Date:** July 2006

## **7. Explore Opportunities for Consolidations, Mergers, and/or Fire Authorities**

### **Objective A. Meet with Potential Partners**

#### **Action Items**

- 1. Identify potential partners**  
Responsible Party: S. Abel & G. Brautaset  
Completion Date: Jan. 2005
- 2. Arrange meetings with potential partners**  
Responsible Party: S. Abel & G. Brautaset  
Completion Date: May 2005

### **Objective B. Make Recommendations to the City Council**

#### **Action Items**

- 1. Review outcomes from meetings with potential partners**  
Responsible Party: S. Abel & G. Brautaset  
Completion Date: June 2005
- 2. Develop recommendations on new partnerships**  
Responsible Party: S. Abel & G. Brautaset  
Completion Date: July 2005
- 3. Make recommendations to City Council**  
Responsible Party: S. Abel & G. Brautaset  
Completion Date: July 2005

